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MEMOIR

OF

THOMAS DRUMMOND,

R.E., F.R.A.S.,

UNDER SECRETARY TO THE LORD LIEUTENANT OF IRELAND,

1835 TO 1840.

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BY

JOHN F. M'LENNAN, M.A.,

ADVOCATE.

EDINBURGH:

EDMONSTON AND DOUGLAS.

MDCCCLXVII.

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PREFACE.

THE assistance which I have received in preparing this Memoir of Thomas Drummond is amply acknowledged in the text. It is proper, however, to define in a sentence or two the precise extent of it. In regard to his professional life (and not farther) I have had the hearty co-operation of Major-General Sir T. A. Larcom, the present Under Secretary in Ireland, of whose brief but able Memoir of Drummond I have also freely availed myself. Some papers put at my disposal by Sir J. F. W. Herschel illustrate this part of Mr Drummond's life and the first stages of his political employment; on which, also, some light is thrown by Miss Martineau. With regard to the Irish part of the life, I owe most to the Right Honourable Maziere Brady, the late Irish Lord Chancellor, who was Drummond's very intimate friend, and, successively, Law-adviser to the Chief Secretary, Solicitor-General, and Attorney-General, under the Mulgrave and Ebrington Administrations. The aid he has given me has been limited to the determination of obscure facts, and he is nowise responsible either for my opinions, or for the manner in which I have expressed them. Drummond's political correspondence during his tenure of office in Ireland, which was carried on with some of the most important political personages of the time, I have not had at my disposal. His home

correspondence, so far as it has been preserved, was placed in my hands by his sister, by whom also the facts of his early life have been supplied.

To my friend Mr Robert Cox I have to express my obligations for valuable assistance in putting the work through the press, and in supplying a copious index.

Should this memoir of a noble man be of use as a contribution to the information of the public on Irish subjects, it will serve a purpose which, as subsidiary to the interest more properly biographical, I have had much at heart in writing it.

The present state of Ireland might justify some curiosity as to its history and condition in past times. In this work will be found a record—very imperfect it is true—of the only great effort yet put forth for the renovation of that unhappy land. It was a failure. The Administration, however, which made the attempt, and in which Mr Drummond was a leading figure, removed one obstacle to the renovation by extinguishing all just complaint of misgovernment. Since 1835 the spirit of the Executive in Ireland has been excellent. The evils to be remedied, however, have lain, and lie, too deep in the institutions and jurisprudence of the country to be reached by the Executive; and till British statesmen fearlessly face them in a perfectly honest and just spirit, the annals of Ireland must continue to be, as heretofore, a record of the misery and unrest of the people, their conspiracies and attempts at rebellion, their punishment and humiliation.

J. F. M'LENNAN.

EDINBURGH, *May* 24, 1867.

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MEMOIR OF THOMAS DRUMMOND.

CHAPTER I.

BIRTH, PARENTAGE, AND EARLY CIRCUMSTANCES.

THOMAS DRUMMOND was born in Castle Street, Edinburgh, on 10th October 1797. His father, James Drummond, was a member of the Society of Writers to the Signet, and had a house in Edinburgh; but, like many members of that honourable body, instead of practising in his profession, he lived chiefly on his estates in the country. These were in Perthshire, where he is still remembered as "The last Laird of Comrie."

"The last Laird of Comrie" was the representative at once of the families of Invermay, Drummondernoch, and Comrie. The common ancestor of these families was Thomas, the fourth son of Sir Malcolm Drummond of Cargill and Stobhall, "Lord of that Ilk," who, in 1445, succeeded as chief of the house of Drummond to the vast estates which then belonged to it in the counties of Perth, Dumbarton, and Stirling. This Sir Malcolm Drummond traced his ancestry through a series of noble names back to the time of Malcolm Canmore, and to Maurice, the first of the name of Drummond. Maurice again was a Hungarian, of the royal house of Hungary, and an attendant on Edgar Atheling, when,

in his flight from England, stress of weather obliged him to take refuge in the Firth of Forth. King Malcolm, who was then living at Dunfermline, kindly received the royal fugitives; to Maurice he showed especial favour, and ultimately induced him to settle in Scotland, bestowing on him various honours and offices and a gift of lands. This is the shape, at least, which the early history of the Drummond family assumed in the beginning of the sixteenth century. Whether it be true or not, certain it is that the family, from Sir Malcolm of Stobhall downwards, has been sufficiently distinguished to entitle its members to dispense with fictitious claims to consideration. The eldest son of Sir Malcolm was raised to the peerage as Lord Drummond in 1487; the fourth Lord Drummond was in 1605 created Earl of Perth; and the fourth Earl of Perth filled the offices of Lord Justice-General and Lord High Chancellor of Scotland. This is not the place, however, to write the history of the house of Drummond.

Of the Drummondernoch branch of the family, there is an account (which may appropriately be quoted here) by David Malcolm, A.M., in a "Genealogical Memoir" of the house of Drummond, published in 1804.* After pointing out its founder, Thomas, fourth son of Sir Malcolm Drummond of Stobhall, the author says—"From him was lineally descended James, the seventh of Drummondernoch, a gentleman of great respectability, who flourished before the Revolution. He was succeeded by a son of the same name, whose grandson

* The earlier portions of this Memoir are founded on "The Strathallan Manuscript," a collection of information as to the house of Drummond, made in 1681 by the first Viscount Strathallan. The manuscript itself was printed for private circulation in 1831.

Patrick, the last of Drummondernoch, succeeded as next heir-male to the Laird of Comrie. This succession was eventually a loss, as it involved Patrick Drummond in debt, and obliged him to sell his ancient patrimony of Drummondernoch and Pittenteean. Patrick Drummond of Comrie, by Miss Buchanan of Lenie, left two sons and one daughter—James, his successor; John, a major in the East India Service; and Beatrice, who married James Drummond, Esq. of Strageath. James Drummond ['the last of Comrie'], on succeeding to the estate, became the representative of the families of Invermay, Drummondernoch, and Comrie. He was a gentleman of great ingenuity, highly improved the estate, and new-modelled entirely the village of Comrie. After his death, which happened 1st February 1800, the estate was sold to the son of Viscount Melville. James Drummond was enrolled a Writer to His Majesty's Signet in 1788, and married in 1792 Elizabeth, daughter of James Somers, writer [in Edinburgh], a lady of great merit and ability, by whom he left issue three sons and one daughter—1. James Patrick; 2. Elizabeth; 3. Thomas [the subject of this Memoir]; and 4. John." The only correction to be made on this account is, that the grandfather of Thomas Drummond was twice married, and that his father was a son by the first wife, and not by Miss Buchanan.

Mr Somers was a Whig, and Mr James Drummond a Tory. At that time this was "a difference with a consequence;" in their case, however, it did not prevent the establishment between them of a close friendship, and ultimately of a close affinity.

Elizabeth Somers, who became Mrs Drummond, possessed great personal attractions, besides being, as

stated by Mr Malcolm, a person of great worth and ability. In the Edinburgh society of her day she was known as "the beautiful Betsy Somers;" and a portrait of her, painted when she was over forty years of age, leaves no room for doubting her title to that designation. She, the beloved mother of Thomas Drummond, will be often referred to in this narrative. She retained her beauty to the last,—a beauty shining through great sadness, we may believe, as she for years survived her darling son. Some who knew her say that at seventy she was the most beautiful old lady they had ever seen.

Such parents had Thomas Drummond: his father a Scotch laird, a man of ingenuity, and the inheritor of the traditions of an old, most respectable, and, in some branches of it, noble family; and his mother a beautiful and attractive woman, whose charms of person were equalled by the excellence of her dispositions and understanding. To have such parents is to have a start in life of the majority of men. Gentle bearing and honourable manly dealing are sustained by regard for family credit, as the natural outcome of qualities accumulated and transmitted from generation to generation in families of long-continued respectability.

Mr Drummond's circumstances became somewhat embarrassed soon after his marriage. As stated by Mr Malcolm, he had played the part of an improving proprietor. He had "new-modelled" the village of Comrie, besides expending large sums in land improvements, and in planting great portions of the estate with wood. He had farther encumbered himself by purchasing the plain of Dalginross, adjoining Comrie. And to effect this purchase and these improvements,

a part only of the rents of his estate had been available to him, a large provision to his sister Beatrice, wife of Mr Drummond of Strageath, falling to be paid out of them. The extent of his embarrassments, however, did not fully appear till his death, when there is some reason to think they were made to seem greater than they were in reality. He died suddenly in February 1800, in the thirty-fifth year of his age, survived by his wife and four children.

The children being all in infancy, and Mr Drummond having left no will, a tutor was appointed to them; and he, finding the debts and burdens to be very considerable, applied for and obtained the authority of the Court of Session to sell the heritable property. The estates were accordingly sold, and likewise the house in Castle Street, Edinburgh. By the time the tutor had paid the debts and expenses, Mrs Drummond found herself without a home, and left with her young family to face the world on about L.120 a year.

Mr Somers had been reputed to be rich, and his two daughters, his only children, to be heiresses. But, while zealous in his professional duties, he was careless of his accounts. On his death, his estate was found to consist chiefly of irrecoverable debts, and his widow and unmarried daughter became part of the household of Mrs Drummond.

She retired, on her husband's death, to Preston, in East Lothian, where for a time she occupied furnished apartments. The following winter she passed in the same village in the house of a friend of the family, a Mr Beveridge, who put it at her disposal free of rent. In the spring she removed to what is now known as Linkfield House, in Musselburgh, which she obtained for a small rent, as it had the reputation of being

haunted. It was then known by the name of "Cabbage Hall." She had scarcely, however, brought the place into order, when the proprietor himself fancied and took it. She then removed to a house on the banks of the Esk, not far from Musselburgh, where the family resided for the next ten years. Here Thomas Drummond passed his childhood and boyhood; and here his mother and grandmother fought their brave fight with worldly difficulties, and fought it successfully.

Mrs Somers, with her unmarried daughter, continued, it will be understood, to form part of the household. Indeed, in some respects "Grandmother Somers" was the true head of the family. She is described as having been "a very managing woman"—a person "at once of great sweetness and great sense." Her portrait supports the character ascribed to her. She appears bright, good-looking, open-browed, with large dark blue eyes, and a figure full of grace; her looks betokening quick wit and good sense, readiness in repartee, and the merriment which sustains banter. She always did the marketing; and she did it well. A neighbouring butcher, an honest rogue in his day, is related to have said of her, "There comes the only lady I never could cheat." She was just the woman to be the head of a good family fallen on evil days, whose members were to be reared to sustain the credit of the house, if not to repair its fortunes. I imagine she superintended the financial affairs of the family, while Mrs Drummond discharged her duties as nurse and mother to her children.

From Miss Drummond, now the sole survivor of the group, we have a glimpse of the life in the house on Eskside, as well as a notice of the early tendencies of her brother. "It was," she says, "a very happy

life; we were the happiest of families. Our greatest enjoyment in the day was a walk with our mother, I getting her one hand and Tommy the other. The rest of us were all fond of gardening amusements. As for Tommy, his pleasures lay in carpentering and mechanical contrivances. He was always *making things.*" There are preserved, as evidences of his success, some excellent specimens of bookbinding done by him when about ten years of age, half-calfs and moroccos, finished to the very gildings on the backs. A well-made writing-desk attested his skill as a carpenter. He was a good rigger of ships, and used to finish the tiny craft with every rope and spar necessary for a large vessel. "About the house," says Miss Drummond, "his power of contrivance made him exceedingly useful. And whatever went wrong, from the roasting-jack upwards, the appeal was to Tommy to put it right." The services he was thus able to render were perhaps of more value than people living on large incomes can well suppose.

The family, it afterwards turned out, should have been better off during these years than it was. Miss Somers having married Mr William Macfarlane, a Writer to the Signet (long popularly known as "Judge Macfarlane" on the bench of the Justice of Peace Court), this gentleman interested himself in the Drummond affairs, and helped to bring about a settlement of them. The result was, the recovery of a considerable sum to the family. It was large enough materially to improve their circumstances. The improvement came at a good time, when the children were growing up and expenses increasing. But before it came, there had been enough of frugality and carefulness in the household; and in the recollection of his early home we

may see a source of the great tenderness with which Thomas Drummond always regarded his mother. To use the language of Miss Drummond, "he idolised her." Also, the experience of this time must have intensified in some degree his natural sympathies with the poor and struggling. How strong these were we shall see. They prompted the most arduous labour of his life—a labour to which, indeed, his life may be said to have been sacrificed.

CHAPTER II.

SCHOOL AND COLLEGE.

THE first school to which Thomas Drummond was sent was the Grammar School of Musselburgh. The master of the school was then a Mr Taylor, who was assisted in his duties by his son Colin. The memory of these persons is not "sweetly odorous" in this connection, and we shall say little more of them than may suffice to explain why this should be so.

Young Drummond, who was short of stature for his years, was far from being a favourite of his master, notwithstanding that he was so diligent as usually to be dux in his classes. And yet Mr Taylor had favourites: they were children in whose homes he and his son were used "to join the social circle." On several accounts the circle at Eskside was direly exclusive of the master and his connections.

It was hard for the emulous boy to be occasionally ousted from his proper place in the class, that some more favoured schoolfellow might get it, and gladden the hearts of hospitable parents. Yet such preferences, in violation of the rule "palmam qui meruit ferat," might have been submitted to; not resented, even if complained of. But that the master's grudge at the boy's superiority should show itself in nail-marks nigh through the ear, that "the most deserving" should systematically be treated with injustice and cruelty,

was unsupportable—not brutality merely, but absolute indiscretion and stupidity, on the dominie's part, certain to lead in time to exposure and humiliation. One day little Drummond came home with his ears horribly pinched and blood all over his dress. This produced the crisis that was certain to come some day. The Eskside circle was not without connections of influence to procure for them an investigation, and to bring the teacher to account. The way in which the boy had long been treated was then fully disclosed, and a lesson read to Mr Taylor which he never forgot.

One of those who interfered to check these practices was Mr Aitchison of Drummore, a gentleman of great wealth, who had been an intimate friend and admirer of "the last Laird of Comrie," and who continued to take an affectionate interest in the family. He is mentioned, in a letter of Drummond's belonging to this time, as reprimanding the Taylors for their improper conduct. This letter, which is addressed to his eldest brother, is carefully ruled with pencil, and written in boy's "half-text." It is dated 27th September (the year was probably 1807), and gives us Tommy's views of the crisis which had occurred. "Mr Aitchison gave him [Colin Taylor] a terrible scold about partiality, which he told to his father, *and Mr Taylor's tongue has never lain.* One time when he was speaking, he said, 'I shall be accused of partiality by none.' I have not told you the half of it. At one time we thought he was going out of his senses, but he has now turned a little calmer."* After this, Drummond received from

* The following genuine "boy's bit" in this letter is worth preserving:—"We are sailing our ships yet. I am sure you will not sail the Dutch ship any more. My mother and aunt think you might give it to me, and I will give mine to John."

the Taylors fair play as well as the ordinary elementary instruction.

His next teachers were of a different stamp: one was a Mr Roy, an accomplished scholar, who afterwards became tutor in the Bedford family; the other, George Jardine, Professor of Logic and Rhetoric in the University of Glasgow.

Professor Jardine, being in delicate health, was advised to pass his summers in Portobello. He was an old friend of the family on the mother's side, and at once fell into intimate relations with them. For Thomas, in particular, he conceived a great affection, and insisted on having him for a pupil. Accordingly, for two summers (the professor being obliged to winter in Glasgow) Drummond had the advantage of his instructions in the Latin language, and, generally, in what are in Scotland called the *Humanities*. The acquaintance and affection thus begun lasted into after life, and the professor and his pupil long corresponded. Some of his letters to young Drummond exhibit him in an exceedingly amiable light. His acting as tutor during these two summers was, in every sense, a labour of love: as it is a pleasure to find an apt and assiduous pupil, he, doubtless, had his reward. The pride of Mrs Drummond may be imagined on his casually remarking to her one day, "John Wilson and your Tom are the cleverest boys I ever had under my charge." The author of the "Noctes" had not by this time flowered into his fame, and it was in fields altogether different from the professor's that Drummond's full powers were destined to be exhibited.

While his summers were spent with Professor Jardine, his winters were passed with a private tutor. The assistance in the former case came from the mother's

side; in the latter, it came from the father's. Mr Aitchison of Drummore has already been referred to as a friend of the family. With him, too, Thomas was the favourite, and he insisted on providing for him a tutor to be resident in the family at his expense. The tutor was Mr Roy, under whose care very considerable progress was made. He and Tom were fast friends—a guarantee for effective action of master on pupil.

In 1810, Drummond, now in the thirteenth year of his age, came to Edinburgh to be a pupil and boarder with Mr George Scott, then a mathematical master in the High Street. He continued with Mr Scott for two years, always walking to Musselburgh on the Saturday, and remaining at home over the Sunday. Scott's pupils were taught in a class, and Drummond was always dux in it. "His knowledge of geometry," writes Mr Scott in 1812, "I have never seen equalled in one of his age; and the progress he is now making in the higher branches of Mathematics and Natural Philosophy, is such as might be expected from one who possesses a sound judgment, combined with uncommon application."*

While boarding with Mr Scott, Drummond also attended classes in the University of Edinburgh, of which he was enrolled an alumnus in 1810. Here his chief subjects of study were Mathematics, Natural Philosophy, and Chemistry. His college exercises, solutions of problems, or proofs of theorems, done in the classes of Professors Leslie and Playfair, have been preserved, and attest his talent for this species of intellectual work. On many of them are remarks written by the professors, nearly all commendatory, such as

* Letter to Mrs Drummond, 24th November 1812.

"Concise," "Remarkably neat," "Most neatly and ably solved;" while frequently the exercises bring out results not expected, or, at least, not asked for, by the prescriber, but which the quick intelligence of the student, going beyond the mere line of prescribed duty, discerned. These results are often and very justly characterised as "most curious," and the mode of discovering and exhibiting them as "most ingenious." Several of them undoubtedly exhibit remarkable ability and ingenuity in a lad of fourteen; and no one can glance over them and be surprised at Leslie's certifying at the close of the course, "I have no hesitation in saying that no young man has ever come under my charge with a happier disposition or more promising talents."*

Drummond's bent now seemed to be distinctly disclosed, and to be distinctly scientific. But while he was chiefly engaged in scientific studies, he was nowise neglectful of his culture in general literature and the classics. Some fairly done copies of Latin verses belonging to this time—he used to submit his efforts to the correction of Professor Jardine—show that his cultivation, though exceeding on the one side, was by no means one-sided. It is impossible to say what might have been the effect on his career of a bias towards mere literary culture, had it been given at this time. A love for classical literature grew upon him with his years, a rare thing in one eminent in mathematics. As it was, the boy's mind seemed to be finding its natural field in the definite logical processes of mathematics pure and applied. Jardine appears to have seen this, and to have hinted at his yielding to the natural bent, in a letter to him, dated 10th March 1811,

* Letter to Mr Macfarlane, 26th December 1812.

returning a copy of Latin verses with corrections. "You must not be too sanguine about your success [in this field]," says the Professor. "Boys who have been accustomed to Latin verses, and *have some turn for poetry*, have great advantages over others." I have ascertained, and evidently Jardine knew, that Drummond, unlike most boys of ability, never courted the muses.

In the end of 1812, or beginning of 1813, Drummond, through the influence of Mr Aitchison, received his appointment to the academy at Woolwich; and thither, in the spring of 1813, he proceeded as a cadet.

CHAPTER III.

BOYISH TRAITS.

I FEEL justified in recording in a separate chapter the few facts which have been preserved, throwing light on the boy-life of Thomas Drummond. That these have value will appear when we come—having got to the end of his too short day—to look back over his way of life, and form an estimate of his character and powers.

Mention has already been made of his constructive tendencies—how he was always "making things." The power of contrivance, and the enjoyment of its exercise, the courage to face, and the ingenuity to overcome difficulties, seem to have been as distinct in the boy as in the man. Moreover he had the capacity, which lies at the root of discovery, of being made miserable by things not understood, On a new roasting jack coming to the house, he took it to his sister, saying he was very unhappy because he did not know why it *ticked.* The unhappiness continued till he undid the jack and got at its secret.

There is a story told of him, which affords a glimpse at once of the boy's objects, and of the circumstances of the family. Sometimes the taste for "making things" could not be indulged for want of money to get the

raw material of his manufactures, little as its cost might be. Once when he was suffering from this money difficulty, a chance offered, and in the expectation of a gratuity, he held a doctor's horse during his visit to a patient. The doctor, coming out, was going to be generous. But grandmother Somers, who had witnessed the proceeding, throwing up the window, prohibited Tom's taking the largess. She was even then full of hope of the boy, and could not refrain from hinting to the doctor "that *he* might live to hold Tom's horse yet." The boy himself, whose pride as against his desire for the money was not uppermost, was grievously disappointed at the interference, and the flitting from his view of a whole fourpence—perhaps sixpence—worth of the longed-for materials.

He was mainly given to study, and found all the relaxation he desired in the exercise of his constructive tastes. Having sufficient companionship at home in his brothers and sister, he had few boy friends. He never was a saunterer, bird-nester, or wanderer over the country. For bird-nesting, indeed, he had an absolute abhorrence. It is said he once watched for days for an opportunity to thrash a boy, a skulking fellow, whom he had found drowning young sparrows in the river. He was full of tenderness, felt for all suffering, and was ever active to relieve it.

Unlike his brothers, says Miss Drummond, he never, during his boyhood, cost his mother an anxious thought. He was always busy, always calm and cheerful, always hopeful. And this temper followed him through life. He was never over-enthusiastic, and never desponding. The foundation of this equableness was undoubtedly his perfect self-reliance, which was early manifested, and rested on the early-developed consciousness of power.

His sister tells of the first occasion on which she noticed a marked exhibition of this internal energy. They were all proud of his college certificates, as of everything connected with him. When he got his appointment to Woolwich, and she was helping him to pack his trunk preparatory to his first great adventure in life, her chief care was that these certificates should be carefully stowed away. He came and asked her for them, and, to her horror, threw them into the fire. "If I can't earn a better character than that," said he, "I don't deserve it." They were burned. Most boys treasure such things with pride, even when they have long ceased to be of value. To Drummond, confident of his future, they were unimportant from the first. It was no act of carelessness as to documents not immediately available for any purpose. No man preserved with more religious care papers for which he had respect—even when, apart from sentiment, they were valueless. After his death, all the letters his mother ever wrote to him were found in a packet, labelled "My dear mother's letters;" while another contained those received from his sister—"My sister's little notes."

Before he went to Woolwich, Drummond had never been at any distance from the home circle, excepting on one occasion, when he went by sea to Easdale, in Argyleshire. The vessel in which he sailed was a small sloop going for a cargo of slates. The Caledonian Canal was not then open, and the voyage was consequently a long one,—from the east to the west of the island, through the stormy Pentland Firth, and round Cape Wrath. The journey seems to have been undertaken for the health of his younger brother John. An account of it is preserved in a graphic letter, written by Drummond from Easdale to Grandmother Somers, and dated

11th July 1812. If "throwing up bile" was good for John's complaint, the voyage must have been exceedingly to his advantage. This letter contains a passage which may be regarded as exhibiting some literary ambition, but which, more probably, is the mere natural expression of a boy's elevated feelings. "The weather to-day," he writes, "is inexpressibly delightful, and the lofty mountains, deep valleys, mild and serene sky, and calm sea, combine to form scenes at once beautiful and sublime."

In a very different style is written his letter to Mr Aitchison, of 3d October 1812, shortly before his appointment to Woolwich, and which was penned at Mr Aitchison's request, no doubt with a view to its being submitted to influential friends. "I feel a strong inclination for the profession of a military engineer. I have studied for these two years those branches preparatory for such a line, and have received a satisfactory certificate from Mr Leslie, professor of mathematics in Edinburgh. Could I only be so fortunate as to obtain a strong recommendation to Lord Mulgrave [then Master-General of the Board of Ordnance], I would soon obtain the wished-for appointment."

The "strong inclination" no doubt existed. His thoughts must have been for some time directed to the profession, as one into which his entrance could be secured, and for which, by excellence in mathematics, he had shown an aptitude. And he would like the general notion of it. That the inclination, however, belonged to that class of desires known as "yearnings after the indefinite," will presently appear. Mr Aitchison procured the necessary recommendation to Lord Mulgrave, and soon after, Drummond was appointed to a cadetship at the Royal Military Academy at Woolwich.

CHAPTER IV.

WOOLWICH.

It was in February 1813 that Drummond was summoned to pass his entrance examination at Woolwich. He arrived on the 24th, and passed his examination the same day.

"He often used to smile," says his friend, General Sir T. A. Larcom,* "at the terrors of his solitary entrance to this portal of his future life. It happened that, at a distance from Edinburgh and his family, he had no relative or friend to accompany and support him in the ordeal of examination; and when, immediately on landing from the packet which had brought him from Scotland, alone, and with his letter of summons in his hand, he presented himself at the barracks, the porter rebuffed him with the chilling information, 'You are too late.' He was received, however, and passed with credit."

The incident alluded to brings out so much of Drummond's character, that it must not be passed over without stating the details. Fortunately they are recorded in a letter written to his mother at the time. He had gone to Woolwich by sea in a packet from

* "Memoir of the Professional Life of the late Captain Drummond," in "Papers on Subjects connected with the Duties of the Corps of Royal Engineers," vol. iv. p. 2. Lond. 1841.

Leith. The passage was rough, but not a *very* long one, as passages were then made. He left Leith on a Friday, and arrived at Gravesend at two o'clock of the morning of Wednesday, the thirteenth day. This was February 24th, and an examination day: so Drummond made up his mind to proceed at once to Woolwich, and undergo the examination. "I had desired the steward the night before," he writes,* "to awake me early, in order that I might set off for Woolwich. He forgot to call me, and I awoke at seven o'clock, dressed, put up my things, and got ashore at eight o'clock. The coach had set off about ten minutes before, and I ran about three miles trying to overtake it, but in vain, A return chaise came up, and I got within two miles of Woolwich when it wanted twenty minutes of eleven o'clock [the hour for the examination]. There the man stopped to rest his horses, so I got out, and ran as hard as I could, and arrived at the Academy five minutes before eleven. I rang a bell, and asked for Russel, the clerk. His wife came, and told me he would be there soon. He came in about half an hour, when he took me to Colonel Phipps, and—to make a long story short—I passed my examination, delivered my letters to Colonel Mudge, and joined that afternoon." He says in another place: "When I arrived at the Academy, I hesitated whether to go in or not, but after travelling sixteen miles, I thought it was a pity not to go in and get it over." He does not mention the fact that the examiner on the occasion was Professor Barlow, who from the moment of his arrival took an interest in him. It was before the appointed hour when the determined young runner reached the gate; but after it, owing to the absence of the clerk, before his

* Letter to Mrs Drummond, dated March 3, 1813.

presence was reported. We may imagine his annoyance at the delay, after he had exerted himself so much to be in time. He had no fear as to passing; he but "wanted in." "Here," said the clerk to the professor, "is a young man from Scotland who pretends to know everything." No doubt Mr Barlow learned somewhat of the circumstances, and would be interested in a youth who showed so much self-confidence and determination.

Though Drummond arrived unaccompanied by a friend, he was not without the means in his possession to enable him soon to make friends for himself. Among his introductions was one to Colonel Mudge, who, after a distinguished career as a geodesist, as superintendent of the Ordnance Survey (which office he still, in 1813, continued to fill), was appointed, in 1809, Lieutenant-Governor of the Royal Military Academy. The colonel from the first showed Drummond attention,—at least he had him to dinner on an early day. This functionary seems to have been far from popular with the cadets, and the first impressions which Drummond received of him were unfavourable. But these quickly wore away. "As to my letter to Colonel Mudge," he writes,* "it is impossible for me as yet to say how that letter will turn out, but I received his promise to assist me." The reason for doubting the value of the promise lay in the character of the governor as painted by some cadets. "He is a man," says Drummond, drawing in a few words a picture, "of diminutive stature, broken constitution, and low spirits, grim looking, and not very easy of access. . . . . However, it is most material to get in with him, as he has the sole management here." Drummond had too

* Letter to Mrs Drummond, 23d March 1813.

much sense and practicality not to appreciate the value of an introduction to a man of such standing, though, as we shall see, he was disposed, in his inexperience, to overestimate it. In an earlier letter, dated March 3, after mentioning that he had been dining with the governor, he says: "So I think I will write to Professors Playfair and Leslie, and thank them for their letters the first opportunity. It is much in my favour to have letters from such men." I infer, as both the professors were friends of the colonel's, that they had introduced their old pupil to him.

He brought with him an introduction to Dr Smith, the head of the medical department, whose relations lived near Musselburgh. The Smiths were exceedingly kind, and he was soon at home in their house, which was situated about a mile from the Academy. He found a friend in Mr Jackson, the cadet who occupied the same room. It happened, also, that the servant in attendance on the room was a Drummond from the neighbourhood of Comrie, who knew both his father and uncle.

The letter, of date 23d March 1813, is a long one. It gives an idea of life at the Academy, besides answering categorically a number of questions contained in two letters received from home. There are symptoms as if of fatigue in the writer, most probably indications of the distress of mind which, we shall see, he was suffering. His financial accounts, he says, are carefully kept, and will be transmitted if required. He appreciates the kindness of the Smiths, and deplores that they are to leave so soon. "Their leaving in May will be an irreparable loss to me." "You desire me particularly to say whether or not I get enough of food. I have always got as much as I desire." It would have

distressed his mother had he stated the whole truth, as he was afterwards forced to do. A portion of it, however, appears from the following account of the round of the day:—"There is a parade at half-past seven, after which we get breakfast—a bowl of milk and a round of bread. At eight o'clock, we go to the Academy, and stay till twelve o'clock, after which we are drilled. Dine at one o'clock, and at two o'clock return to the Academy till half-past five. There is then a parade again, after which no cadet is allowed to go out without leave. At eight o'clock we have supper—bread and cheese; and at nine o'clock we must be in bed, for then a lieutenant of the artillery, the servant and the corporal, come round, put out the candles and fire, and lock the door. At five o'clock in the morning the servant comes and takes away the shoes; comes back at six o'clock and puts on the fire; and at seven we get up. This is the life we lead."

The picture, it must be confessed, is far from attractive. Here is a boy, fresh from home joys and comforts, suddenly caught in the round of a desolate *system*, and worried in it from five o'clock in the morning till nine o'clock at night; his diet, so far as it is stated, little better than work-house fare, beginning with milk and a round of bread, and ending with dry bread and cheese. Parades and drills incessant; the sense of freedom pinched out. Morning parade early enough, one would think, without a servant systematically to disturb one's rest an hour and a half before one was wanted. A shudder comes over me recollecting another *system* not quite so bad, yet bad enough,—academical, but ecclesiastical, not military,—with morning and evening chapels in the place of parades. How did the youth like that of which *he* had experience? He would have

died of the hypocrisy of the chapel system. A parade is at least such a reality as it pretends to be.

The indefinite object of his inclinations having become definite, desire changed to aversion. The *system*, from the first intolerable, soon became hateful. Moreover, he was now in a position to understand the nature of the career he had chosen; and neither its duties nor its rewards were such as, when ascertained, reconciled him to the service. He wanted to get out of it, and out of it *at once*. How great was the distress he suffered at this time may be gathered from the following letter to his aunt, Mrs Macfarlane:—

"ROYAL ARSENAL, *March* 26, 1813.

"MY DEAR AUNT,—You will be greatly surprised, and will, I daresay, sympathise with me when you read this. I have been here now upwards of a month, and from one of my mother's letters I gather you all think I like the place very well. God knows, I never told you this in any of my letters. Now you must promise to keep my mother ignorant of what I am about to tell you. From the moment I entered this place, till the present time, I have been *miserable*, and what I shall do I know not. I expected to have seen Mr Aitchison, and to have told him all this, but from some cause I have not seen him; but perhaps he has not left London, and I may yet see him. I trust I may. I have hesitated long with myself whether or not to tell you this, but my situation becoming every day more irksome, at last compels me to write to you; and you are the best person to give me advice, as I should not like my mother to know, she being so unwell. I would give worlds, if I had them, to get my discharge. But when I think of the enormous expense she has been at in sending me here, and how ill she can afford it, added to my last winter's expense, and when I consider her illness, I know not what to do. Upon no account show her this letter; you know what effect these things have upon her. But if I got my discharge, I might follow some profession in which I might make it up to her, and in which

I might be happy. You see how I am situated; as my mother is so unwell I am afraid to tell her. If I delay till July, it will be too late, and I will never get out. You will think this most unaccountable conduct, but the unhappy situation I am in *must plead my excuse.* After being ready for a commission, there are many chances against getting into the Engineers; promotion is so slow in the Artillery, that all try to get into the Engineers. In the Artillery, one may be a lieutenant for twenty years, living on 5s. 6d. per day. Had I known all this before I came, had I only had a trial of this place! Write to me as soon as you can, and tell me what to do. Should I write to Mr Aitchison, entreating him to apply to General Hope to get me my discharge? O that I was only in Edinburgh in person to tell you all! Colonel Mudge, to whom I was recommended, tries always to prevent those that are good at mathematics from getting their discharge. Whether should I keep it a secret from him, or try and engage him to help me? He could get my discharge if he asked it. You may think it *most foolish* in me talking thus, and that I may like it better after I have been longer here. But I have seen the life I have to lead, and though I was offered a commission in the Engineers just now, I would be most thankful to give it up. There are a great many wanting to be discharged. *I am afraid to delay.* I will get it *far easier* now than after I have been longer here. Write to me immediately if you can, and tell me what to do. O that I had had a trial of this place! *Do not show this letter to my mother.* General Hope may apply for my discharge, and surely they would not refuse him. . . . I will look every day for your answer. Remember me to Mr Macfarlane. Farewell.—I remain, my dear aunt, your affectionate nephew,

"THOMAS DRUMMOND."

He wrote again on this subject to his aunt on April 23, 1813. She had told him it would be easy to obtain his discharge in July, and he agreed to wait. "The vacation," he writes, "commences about the 10th July, when we will debate what is to be done." Meantime he entreats her to keep his misery a pro-

found secret. The desire to be discharged seems to have been epidemic in the Academy. He mentions several by name as affected by it, his friend Jackson being one of them. "—— means to make no progress in his studies, so as to be discharged at the end of the year. As to ——, he is too far advanced ever to think of retreating; but he is completely tired of it. Keep all this a deep secret from their friends."

Before the vacation came, however, he had caught a little of the better spirit of the place, and was rising superior to its annoyances. The debate as to what should be done probably never was held; at least there is neither record nor trace of it.

He passed his entrance examination in the end of February; by April he had passed his first examination for a place in the school. The result is recorded in a letter to Mr Aitchison, dated April 13, 1813. "At the last examination here I got from the bottom of the sixth academy to be fifth in the fifth academy, by which I took fifty-five places, and was made by Captain Gow [the commanding officer] head of a room. There is an examination here every month, by which means you have an opportunity of rising in the Academy. But there is no such thing as studying by yourself. This is prevented by the older cadets, who, being at the head of the muster-roll, can do what they please; and as they are always the most ignorant and idle fellows among the cadets, they not only dislike studying themselves, but prevent others from doing it."

A letter to his mother, dated 27th April 1813, is mainly occupied with matters foreign to the studies and competitions at Woolwich. Captain Waugh, a friend of the family, has introduced him to a Lieutenant Chapman, who is very kind, lends him mathe-

matical books, and invites him to his rooms to study. He is intimate with a Lieutenant Smith, and Jackson and he are faster friends than ever, and often go long walks in the evening. "It will be a sad loss to me when the Smiths go. Their kindness has been beyond expression." Next Sunday he is to go to visit Mr Hart at Brixton, a friend mentioned for the first time. Fires and candles are now put out at ten o'clock; they were extinguished at nine o'clock in the sixth academy. But the suppers of bread and cheese have grown unsatisfactory. O for the penny post! Almost all the letters contain allusions to the cruel postal rates, and the desirableness of franks. In one, dated 27th May 1813, the clamour for franks increases. By this time he has repeatedly visited the Harts at Brixton, and been most kindly entertained. They are obviously great friends of the family; press him to spend his vacation with them; and then, that being declined, are urgent that he should bring his sister Eliza to visit them when he returns from Scotland.

In his letter to Mr Aitchison he had been looking forward to a competition to take place before July for the vacancies, should they occur, in the senior department. The vacancies occurred, and the competition followed. On the 1st of July he records the result in a letter to his mother. "The examination is now over, and everything has succeeded according to my wishes. I am first on the mathematical list, and second in the Academy. . . . . Yesterday was the grand examination day for commissions in the first academy. The vacancies have all been filled, and a few supernumeraries left. If Portugal don't help a little, promotion will be slow." It is thus that, through class feeling, even the best of men are brought at times to

look upon war. "When I return I shall be at the upper barracks, or, to speak so as you may understand me better, at the senior department." His distinguished place had won for him an appointment to the upper school.

A few days after this, Drummond returned to Scotland to visit his relations. In less than four months he had won his way from the bottom of the sixth academy to the top of the junior department, and secured his appointment to the senior department. Referring to his rapid progress, General Larcom says: "His mathematical abilities soon made him conspicuous; and it is remembered that he was moved from the sixth to the fifth academy without the usual examination, and passed with such rapidity through that academy, and the fourth and third, that at Christmas of the year in which he joined, he entered the second academy."* The distinguished General here appears not so well informed as usual of the conditions of Drummond's progress. If "it is remembered" that he was promoted to the fifth from the sixth academy without the usual examination, the recollection is probably of some story concocted and circulated through envy. We have seen, from his letter to Mr Aitchison of April 13, 1813, that he won that step after the usual examination, and an *un*usual display of ability, by which he earned at once fifty-five places, and mounted from the bottom of the sixth to be fifth man in the fifth academy.

When he returned to the family in July for the vacation, he looked very unwell. No doubt, hard work, inferior living, and mental distress, had reduced him not a little. It will be remembered that at first

* Memoir, p. 2.

he gave a favourable account of the food supplied to the cadets, and that afterwards he complained of the suppers. As time passed, the meals grew more and more unsatisfactory, and he had at last to receive remittances from home in aid of his breakfasts and teas; his friends, Dawson and Kennedy of Kirkmichael, clubbing with him for these extra repasts. But before he disclosed his case and got this assistance, he was half-starved at Woolwich. The joints at mess were carved by "the respectables," the loafers described in one of his letters as being at the head of the muster-roll, and doing what they liked. The respectables ate up everything, and left nothing for the boys. In this state of things, and having no money to procure food, Miss Drummond states he wrote to a friend that he was "like to die of hunger." The friend (we suspect Mr Hart, who appears, from one of his letters, to have lent him L.4) at once sent money to enable him to get meat and tea. To complain of "the respectables" would have been worse than useless.

Another thing which made him suffer in health was a "practical joke," as a certain class of actions are called, which ought more properly to be regarded and punished as crimes. Some cadets came in the night and poured a tubful of water on his bed. He became ill in consequence, and had to go to the hospital. It appears, from his letter of May 27, that he remained there three days, suffering from an affection of the throat, of which he never got rid. The fact that this "joke" had been played upon him, came to the knowledge of Professor Barlow, who took care so to express his sense of it, that nothing of the kind was again attempted. Is it too bad that it was suspected that the perpetrators of the "joke" aimed at

impeding the progress of a lad with whom they were unable to cope in a fair field?

On the eve of his return to Woolwich, his sister, who had amassed a little money, was urgent that he should take it from her as a protection against casual wants at the Academy. "The night before he left us," she says, "I took my money, and desired him to take it. We always took farewell at night to avoid disturbing the house in the morning. He refused for a little—a very little. At last he agreed, and I retired so happy, thinking he had got it. In the morning, when I awoke, there was all the money at the back of my door."

A letter which, in the vacation, he received from Professor Jardine, is interesting as illustrating the attitude in which his old master now stood to him, besides being of high value in itself for the wisdom of the advice it contains.

"HALLSIDE, *4th August* 1813.

"MY DEAR THOMAS,—I received your letter, and I need not inform you that I am highly pleased with the information it contains, and with the very flattering accounts I have had of your conduct and progress at Woolwich from other quarters. I have often seen Colonel Millar, who was in this neighbourhood four or five weeks, and he informed me that Colonel Mudge said to him, that you were just such a student as he wished, and that, if you continued your ambition and your industry, there was no doubt of your future success. Colonel Millar will at all times be ready to give you any friendly advice which you may think necessary, and to interest the masters in your favour. I have a prospect of soon seeing a friend of mine, a great mathematician, and if he be acquainted with Dr Gregory or Mr Bonnycastle [both of them professors at the Royal Military Academy], which he probably is, I shall certainly get you recommendations to them from him.

"But, my dear young friend, after the introductions you

have already had, you have it in your power to do much more for yourself than can be done by any recommendation from others. Every master is pleased with the progress of his students, provided it be not accompanied with conceit or presumption. Continue, therefore, your industry, and do justice to your talents, and you will find friends ready to serve you. I have no advice to give you with respect to your studies, excepting this, that you should always make yourself completely master of the elements or first steps of your processes or demonstrations, and never pass over any important step till you fully comprehend it. You know well that nothing can be done in Geometry if you do not carry light, evidence, and precision, along with you; and that, though your progress should even be slow in this sure path, you will, in fact, advance much faster than when you are obliged to turn back and to resume your former labours. I need not suggest to you, for I daresay it is a part of your *pratique*, to attempt demonstrations of your own in a different manner. But I commit all these things to your prudence and to the instructions you receive.

"You have it much in your own power, Thomas, to recommend yourself to your masters by receiving instruction from them patiently and pleasantly; and particularly by anticipating what you know will be agreeable to them in the course of your studies, and showing a good example to others. You have something to do also with your fellow-students. I am sure you will discover on all occasions polite, obliging dispositions to them, and do them any favour in your power; not by doing their work for them, for that is a hurt to them, and highly improper on your part, but by giving them advice and aid in the doing their own work. But, above all, Thomas, be sure to discover as little as possible your superiority, or more successful progress, by disgusting and offensive airs of pride or of contempt. Upon all these things I have nothing to fear from what I know and what I hope.

"My dear young friend, you are now at a distance from your affectionate and anxious mother and your other friends, whom I am sure you will ever gratefully remember; and you

must mix with many young persons who have been brought up and instructed very differently from you; and you must be exposed to many temptations of various kinds at present and as you advance in life. I therefore most solemnly advise you to adhere strictly to the good instructions you have received, and the good principles of religion in which you have been brought up. I do not mean that you are to show yourself a stiff and sour Presbyterian. Religion is a matter betwixt God and your own conscience, and you may do your duty completely both to God and man either as a Presbyterian or an Episcopalian. What I mean is, that if, when you are still better qualified to determine, you prefer the one to the other, adhere to it, but not rigidly, as the difference is in form not in substance. You will, no doubt, meet with many young persons who think and talk lightly, perhaps irreverently, on these subjects. You need not attempt to correct or reform them unless the occasion be very favourable; but, whatever they do, preserve your innocence and integrity; you will find them never-failing sources of comfort and happiness when you most require them. There are many gross vices and faults, which, from their frequency, and the disguises they put on, pass for trivial and common, and are often thought qualifications, which I most earnestly wish you to avoid. I have in view, chiefly at present, swearing, taking the name of God in vain, and impure and improper discourse. These, I trust, you will ever hold in abhorrence. Nothing is more unsuitable to a gentleman—I speak not of its criminality—than vulgar swearing. No well-bred gentleman swears,—at least it is a blemish on any character, and puts the gentleman on a level with the greatest blackguard. Thomas, you are to be a soldier and a man of honour, and you must preserve that character uniformly. You will best preserve it by avoiding causes of offence, and by taking a cautious part in the offences and differences among your companions and friends. This is essentially necessary. Because, on proper occasion, there must be no doubt of your honour, and there must be regard to your character. Well-disposed, well-bred men, and men of accommodating, obliging dispositions, seldom or never have any occasion

for their prudence or resolution. These are better discovered in very different situations. My dear Thomas, I have very little more to say to you at present, but shall at all times, while I live, be ready to give you my best advice whenever you wish for it. I have only to recommend to you to remember at all times your beloved mother and grandmother. I know you cannot forget them. But let them be present with you. Think of the pleasure you give them when you do well, and think of the tears and misery you would cause them if you were to do otherwise. I am sure your kind, affectionate heart could not bear to think of a suffering, miserable mother. God bless you, and preserve you from all evil. Fear God; honour your parents. Your days shall be long and your end happy. . . . .—I ever am, my dear Thomas, your faithful friend and servant, "GEO. JARDINE."

When Drummond returned to Woolwich, in August, he entered the senior department, and had new and pleasant rooms, as well as pleasant comrades. He now became very friendly, even intimate, with Mr Christie, his old master in the fifth academy. "I conjecture," he says, writing in September, "that I am much indebted to Mr Christie for Colonel Mudge's good opinion of me." By October there was another examination, and he gained another step of advancement. "I have now a piece of good news to tell you," he writes to his grandmother,* "at which you will heartily rejoice. I have got into the third academy. I have a good friend in Colonel Mudge; and now that he has got hold of me, he will probably never let me go till he has landed me safely with a commission in the Engineers." The same day he wrote to Mr Aitchison, whose good services he always gratefully remembered.

On the 14th November 1813, he writes that there is

* Letter to Mrs Somers, Oct. 3, 1813.

to be an examination in about a fortnight, and that he will be very busy till then. This is the last of the Woolwich letters that has been preserved; there is a gap in the correspondence; and the next letter is dated from Plymouth, in February 1817. We know, however, the result of the examination for which he was preparing; he again took a step, and entered the second academy. "By Christmas of the year in which he joined," says General Larcom, "he entered the second academy. Here it perhaps was fortunate, that instead of being thus early launched into military life, a pause occurred, during the short peace from the summer of 1814 till the escape of Napoleon from Elba; after which, in July 1815, he left Woolwich for the corps of Royal Engineers." Joining the academy in 1813, he became in 1815 a member of the corps, notwithstanding a considerable interval, during which the course of promotion was arrested. Having advanced to the second academy within ten months, he entered the first soon after, and having stepped up all the rounds of the ladder in about a year,—a progress which many took several years to make,—he stood waiting and fully prepared for a commission.

"Much of this success," says General Larcom, "was doubtless to be attributed to the admirable preliminary education he had received, but much also to a character of determined perseverance, and to the vigorous and well-regulated mind he brought to bear on all subjects. To this it was probably due that he never became exclusively a mathematician, but advanced equally in all the various branches of study, being at that time, as he continued through life, distinguished for general intelligence, and for aptitude to seize on information

of every kind. His mathematical character at Woolwich has been thus well and justly sketched by his friend and master, Professor Barlow. 'Mr Drummond, by his amiable disposition, soon gained the esteem of the masters under whom he was instructed; with the mathematical masters in particular, his reputation stood very high, not so much for the rapidity of his conception, as for his steady perseverance, and for the original and independent views he took of the different subjects which were placed before him. There were among his fellow-students some who comprehended an investigation more quickly than Drummond, but there was none who ultimately understood all the bearings of it so well. While a cadet in a junior academy, not being satisfied with a rather difficult demonstration in the conic sections, he supplied one himself on an entirely original principle, which at the time was published in Leybourn's Mathematical Repository, and was subsequently taken to replace that given in Dr Hutton's Course of Mathematics, to which he had objected. This apparently trifling event gave an increased stimulus to his exertions, and may perhaps be considered the foundation-stone of his future scientific fame. After leaving the academy, he still continued his intercourse with his mathematical masters, with whom he formed a friendship which only terminated in his much-lamented death.'"

"This remarkable combination of good qualities," continues the General, "was early appreciated by the admirable discernment of the Lieutenant-Governor, General Mudge, whose judicious encouragement it gained." We saw a confirmation of this in the letter of Professor Jardine: "Colonel Millar informed me, that Colonel Mudge said to him, that you were just such a student as he wished, and that if you continued

your ambition and your industry, there was no doubt of your future success." When this was written Drummond had been only four months at the academy. He himself seems to have been unaware that human discernment could go so far or so swiftly, and disposed to ascribe his success in some measure to the introductions he had received, and the friendships he had formed. We have seen him attributing his standing well with Mudge to the good offices of Christie, and his advancement in some measure to the good offices of Mudge. It did not occur to him that the governor, a discerning man of the world, having marked him from the first as "one of the right stuff," was bound thereafter to watch and promote his progress. Mr Christie's good-will turned on the favourable opinion he had formed of his character and abilities. In short, to a man like Drummond, introductions are of importance only in so far as the acts of friendly recognition to which they may lead, support the courage; and so far as they may serve to disclose, at once, merit which sooner or later must assert itself.

CHAPTER V.

THE CORPS OF ROYAL ENGINEERS.

In the Corps of Royal Engineers—which Drummond next entered—the conditions of progress were different from those established at the Woolwich Academy. At the academy the principle of promotion was superiority as tested by competition; in the corps the principle was seniority as tested by standing. There, everything gave way to excellence; here, excellence gave way to priority. An officer might distinguish himself; promote himself he could not—a highly objectionable rule. Where merit has to wait its turn, and by waiting is sure to get it, the inferior person must often be in the superior position, and merit itself frequently die out or desert in the period of expectancy. While seniority waits, senility is in office. It is, however, a good feature in the organisation of the corps, that it ignores the system of purchase. Promotion can be got by waiting, but not by money.

Prior to 1763, the duties of engineers in the British army were discharged by officers taken from the regulars; but in that year the Engineers were formed into a regiment or corps, grouped in battalions and companies. In 1783 the corps was made a *Royal* corps, with a distinctive uniform, the Royal Academy at Woolwich being assigned for the education of its cadets. Its

head-quarters were established at Chatham, and its management put under a special department of the War Office, whose head is the Inspector-General of Fortifications. At once the scientific and the best paid branch of the military service, it consists of about 380 commissioned officers, the same number of non-commissioned officers, and about ten times that number of rank and file. It is scattered all over the world in times of peace, engaged in a variety of public services. Among the most important of its achievements is the Ordnance Survey of Britain and Ireland, concerning which we shall have a great deal to say hereafter. Of its commissioned officers many have taken high rank in the scientific world, and even of its non-commissioned officers not a few have won the like distinction.

Such is the corps which Drummond entered as a commissioned officer, on leaving Woolwich in July 1815. Of his earlier years in it the information is scanty. When his letters recommence in February 1817, we find him at Plymouth engaged in "military and mathematical studies," and in the study of Latin and Greek, "with two hours a-day devoted to general literature."* He was expecting to go to Chatham in March; and there is a letter to his mother, written from that place on the 9th of April. "Since my arrival here," he says, "I have had little time to spare; but in order that you may fully comprehend the truth of this assertion, I shall give you some account of our duties. In the first place, then, there are four schools where the privates are instructed in reading, writing, arithmetic, fortification, and practical geometry. To these four schools four subalterns are appointed, who ought to attend them between half-past six and nine A.M., the

* Letter, 1st February 1817, to his mother.

hours of instruction. At half-past nine the men go to their field duties, and continue till twelve; go again at one, and remain till half-past five. We dine at six, so that there is little or no time left for other occupations; besides that we have plans, &c., &c., to do." These are such details as would be communicated from a new station. It is probable that in July 1815, after getting his commission, he returned to Scotland on a visit to his relations; that he was thereafter stationed with a company of the Engineers at Plymouth, where there were the means of military instruction; and that he joined the head-quarters at Chatham for the first time in March or April 1817.

"At Chatham," says General Larcom, "a new world opened on him; the practical application of varied and almost universal knowledge brought by Colonel Pasley to the aid of military science offered the highest attraction to a mind like Drummond's. It was here also that he first became acquainted with Major, now Lieutenant-Colonel, Reid, whose talent and services he regarded with admiration, with whom acquaintance soon ripened to intimacy, and whose friendship he cherished to the last. The writer of this notice has seen him in Ireland in later years, and, amid other cares, dwell with animation and delight on the movements of the British Legion, in which Lieutenant-Colonel Reid then held a command in Spain, and apply to the campaign the strategic rules and precepts he had gained from his early military reading."

Colonel Reid, who afterwards became Colonel Sir William Reid, Governor of Malta, was a Scotsman, and had been educated at the same school with Drummond's brother James. "He was all through the Peninsular war," says Drummond in one of his letters, "and has

gained for himself a brilliant reputation." The reputation was not merely military; he was devoted, like his youthful admirer, to scientific inquiries, and was the first to propound, though not in a fully developed shape, the circular theory of storms.

In the autumn of 1817, Drummond made a journey to France. "His military fervour," says General Larcom, "led him to obtain leave of absence for the purpose of visiting the army of occupation, and attending one of the great reviews. Many humorous adventures and difficulties in this first visit to a foreign country formed the subject of amusement afterwards; but he always remembered his tour in France, because it first brought him into acquaintance with his future friend and colleague, Major-General Sir John Burgoyne, then commanding engineer, with a division of the army." During the visit he made a copy of a work by Sir John Burgoyne, then in manuscript, "Memoranda on some of the Practical Operations of a Siege." This was no holiday amusement. The manuscript is a long one, and illustrated by numerous carefully-drawn diagrams.

On his return from France, he settled to the routine of the Chatham course of instruction. He studied with enthusiasm the literature of his profession. "Jomini and Bousmard," says Larcom, "were his favourite authors, and often has the morning light surprised him in deep discussion on the details of Waterloo and the strategy of the recent campaigns." He also began again to indulge his taste for "making things," which he could now do without being troubled by considerations of cost.

His first invention seems to have been a pontoon, which he designed in the spring of 1818. There is a description of it in the Larcom Memoir, communicated

by his friend, Captain, afterwards Lieutenant-Colonel, Dawson:—"The various inventions to supersede the use of the old pontoon led Drummond to consider the subject, and he made a model of a form like a man-of-war's gig or galley, sharp at both ends, and cut transversely into sections for facility of transport, as well as to prevent it from sinking if injured in any one part. Each section was perfect in itself, and the sections admitted of being bolted together, the partitions falling under the thwarts or seats. The dockyard men and sailors to whom he showed it said it would row better than any boat except a gig; and it was to be light, and capable of being transported from place to place on horseback."

I am unable to say what was the fate of this invention. On the 27th of March 1818, he writes to his mother that he is busy on the model and a memoir, which is to be sent with it to the head office. "I shall let you know," he says, "what success my memoir meets with. But there is no wish at the office to bring forward anything of that kind." What he saw there a few days later, deepened the feeling that the Inspector-General was indifferent to the inventiveness of his officers. "When I was at the Engineer Office, a few days ago, I found Major Blanchard's model with his memoir, and a letter addressed to General Mann, in the anteroom. The box had been opened, only one of the models taken out; his memoir apparently had not been looked into, for within the first leaves was the letter I have just mentioned unopened."* At this time he expected to have his own model finished within a week. By the end of May he had finished both it

* Letter to Mrs Drummond, April 4, 1818.

and the memoir, been to London with them, and returned to Chatham. From a letter dated May 31, 1818, it appears that on presenting his model he had "experienced a gracious reception;" that there were altogether four models to be submitted, of which one, by a Major Lewis, was not yet prepared; and that a board of officers was to be appointed to consider the four plans. One of the models was by Major Blanchard. Whoever the fourth competitor may have been, it was a distinction for a subaltern to be able to compete with a reasonable prospect of success with officers so old in the service as Major Lewis and Major Blanchard. That Drummond had such a prospect appears from the fact that a high opinion of his design was entertained by his friend Colonel Reid, a man of great ingenuity. "If the plan is not approved," says Drummond, "I may safely say it will not be laughed at. Whatever, then, may be the result, it may be for good—it cannot do me harm." It undoubtedly advanced his reputation.

"Several other inventions," says General Larcom, "are remembered as belonging to this time, which show the activity and readiness of his mind, and the interest with which he addressed himself to his new duties. But in reference to bridge-making, an anecdote may perhaps be preserved which brings out other qualities of the man. He was charged with the construction, for practice, of a bridge of casks, in the rapid current of the Medway at Rochester Bridge, and having previously made piers of the casks in the still water above the bridge, it was necessary to move them through the rapids to get them below the bridge. The piers were, as usual, lashed two and two for security; but one remained, and as its removal was likely to involve some danger, Mr Drummond determined to go on it himself.

"There were two soldiers on the pier, one of whom showed a little apprehension at setting off. Drummond placed this

man next himself, and desired them both to sit quite still. They passed through the arch in safety, when the man who had previously shown apprehension, wishing by activity to restore himself to his officer's good opinion, got suddenly up to assist in making fast to the buoy; in an instant the pier upset; all hands were immersed in the water, and the man who had caused the accident, being on his feet, was thrown from the pier and drowned. Mr Drummond and the other man clung to the pier, and Mr Drummond afterwards described his sensations, when finding his body swept by the current against the underside of the pier. His last recollection was a determination to cling to one side of it, in hopes the depression of that side might be noticed. This presence of mind saved him and his comrade; for, as he expected, a brother officer (Fitzgerald), noticing the lowness of one side, sprang from a boat upon the other, and immediately the heads of poor Drummond and the sapper appeared above the water. Drummond was senseless, with the ropes clenched firmly in his hands."

Having sent in his memoir and model pontoon, and arranged his affairs at Chatham, he proceeded to Woolwich, where his old college friend Dawson was established. By this time Drummond had been appointed to the company of the corps stationed in Edinburgh, and only waited near London lest he should be called to give explanations before the board of officers appointed, or that was to be appointed, to consider the pontoons. It does not appear whether the board ever met or came to a decision. By the beginning of July, when he proceeded to Edinburgh, nothing whatever had been done.

"His duties at Edinburgh," says General Larcom, "offered nothing to engage his attention, relating merely to the charge and repair of public works; but he was happy in being again thrown among his family and friends, and more, in the opportunity again afforded

him of pursuing the higher studies in which he delighted, at the college and in classes, and among the scientific society of his native city.* He found the duties, however, so trivial, and the prospects of the service so disheartening, that for some time he meditated leaving the army for the bar, and had actually entered his name at Lincoln's Inn with this view." That he should have been disheartened, is not surprising. In his letters in the spring of 1818, he complained of his prospects, and longed for, what he saw no chance of, active employment. If that feeling could spring up at Chatham, it must have grown in Edinburgh. And in the interval he had suffered various annoyances from those in authority, too slight to be recorded here, but which would tend to engender disgust at the service. The indifference of the head office to the pontoon inventions would not diminish the feeling.

It is a curious speculation what his career would have been had he embraced the profession of the law. When, at a later date, he gave up science for politics, it was the complaint of many that he was deserting his natural calling. "He was in every respect," Sir John Herschel has said to me, "a most excellent person. There was but one ground of complaint I ever had against him—that he deserted science. That was his natural field, and he had every qualification for the highest eminence in it." Sir Thomas Larcom tells me

* We have a glimpse of one class of his occupations during this stay in Edinburgh. The Rev. A. Craig, of Buccleuch Place, encloses, at Mrs Drummond's request, his account for services in reading Greek with Lieutenant Drummond for the three months ending March 25, 1820. "I cannot speak in too high terms," he says, "of Lieutenant Drummond's talents and diligence while he read with me, and I was very sorry that his studies were rather prematurely interrupted by his being so suddenly called off."

that he has known Dr Romney Robinson, the astronomer of the Armagh Observatory, to break into censure of Drummond for "deserting science," as he called it; ending by the reflection, that if his poor friend had not committed that one fault, his life might have been spared to the country. And yet, when Drummond became political, he had all the success that could be commanded by a specialty for politics. The fact is, his talents were so great, and his cultivation so general; his sense so sound and manly, and his sympathies so warm and generous; he combined high intellectual with the best personal qualities, and, being an indefatigable worker, must have succeeded in anything to which he deliberately chose to apply himself. Probably, had he in 1819 "deserted" the military service for the law, he would only the sooner have been brought into political life. I cannot doubt that he would have attained forensic eminence.

His own views as to the spirit in which a man should choose and enter the profession of the law, happen to be preserved. A friend being desirous to join the Scotch bar, Drummond, in a letter from Plymouth, urged several reasons against his doing so—the chief being that he had not the natural qualifications to attain eminence in the profession. "Were his nature and energy of such a kind as to justify any reasonable expectations of his distinguishing himself at the bar, I should say no more. No situation could be more honourable or respectable. But I am convinced, and 'tis useless to conceal it from him, if he has not already found it out, that he must alter materially, or he is not suited for the bar. To succeed in so arduous a profession, he must enter it with all the ardour of enthusiasm and determination to succeed; he must

look upon his want of friends, and other such obstacles, as so many triumphs to be obtained and so many trophies to be won." This is as forcible as it is frank, and (as the event proved) it was true. The aspirant proposed to give up a profession in which he was engaged. Apropos of this, Drummond proceeds:—"There are many instances of men embracing one profession and rising to eminence in another; but I fear there is an essential difference between such characters and his, not so much in point of abilities, as in ambition, eagerness, and exertion." It is clear he had been carefully considering the conditions of success in the legal profession, which many of "the briefless" only begin seriously to do after years of disappointment. Had he thrown himself into it, no doubt he would have laboured in it with untiring zeal. Such, however, was not to be his career.

In the autumn of 1819 he became acquainted with Colonel Colby, when that officer was in Edinburgh on his return after the summer operations of the Ordnance Survey in the Scottish Highlands. When Colby, in 1820, was appointed successor to Mudge as superintendent of the survey, Drummond received from him and gladly accepted an offer to take part in the work. It was an opportunity of combining scientific pursuits with the military service; and for the time he abandoned his intention of deserting the corps.

CHAPTER VI.

THE ORDNANCE SURVEY.

THAT the general reader may appreciate the services of Thomas Drummond in the sphere of duty which he now entered, it is necessary to explain briefly the principal operations in geodesy, and to glance at the history of the Ordnance Survey of Great Britain, and the methods which, up to his time, had been employed in it.

Geodesy, as a practical art, falls into two main divisions, in each of which there are peculiar difficulties to be surmounted: the first of these regards the measurement of *base-lines;* the second, the triangulation of the surface to be surveyed and measured.

A *base-line* is an initial measured line, whose length is assumed as the unit to which all other distances calculated in the survey are temporarily referred. The exact length of the base in yards, feet, and inches being known, these other distances admit at once of being reduced to yards, feet, and inches. But any error in measuring the *base* must enter into all of them. For convenience in measuring any large tract of country—in other words, in constructing a *Trigonometrical Survey*—it is necessary that the length of the base should be a considerable multiple of the standard unit of length, several thousand yards at least; and for the accuracy of the survey, it is necessary that this length should be measured most exactly.

In measuring a base-line it is necessary to level the ground, to *define* the line, by marking in a permanent way its two extremities, and to *allineate* it—*i.e.*, make it so *straight* as to allow of its being foreshortened to a point. These things being done, the line must be measured with some *measure*, or instrument of definite length. The measure should possess several qualities, to give any high degree of exactness in the measurement. It should be (1.) as large as is consistent with its being easily manageable; (2.) of invariable length; (3.) so formed as to allow of its being easily kept throughout its length in the line to be measured; and (4.) so formed as to allow of the exact juxtaposition of end to end of the duplicate measures employed, if such juxtaposition be not by some contrivance rendered unnecessary. It is obvious that the errors of measurement, supposing the measuring apparatus itself to be perfect, are apt to increase with the number of times that the measure must be applied to the base to go over its length; and that if the measure expands with heat and contracts with cold, or expands with moisture and contracts with dryness, like a rod of wood, the result of the measurement must be uncertain, and may be erroneous. If, again, the measure be flexible, like a long rod or chain, there must be difficulty in keeping it fully stretched, straight along its length, and wholly in the line; and errors corresponding to this difficulty must be entailed on the measurement.

The base being measured, the next set of operations, those of the triangulation, commence. Some object is fixed upon, which is considerably farther from either end of the base than the length of the base-line. Theodolites, with delicately graduated circles, capable of measuring angles to an extreme nicety, are then

placed centrally over the dots which mark the extremities of that line, and their telescopes are directed to one another until, as it has been graphically said, "they look down the throats of each other." The telescopes being in this position, are clearly both of them directed along the base-line. Each of them being now turned round till it looks straight at the object which has been fixed upon, the instruments are clamped, and the angles through which the telescopes have been turned are read off on the graduated circles. The angles are thus ascertained, which lines, drawn to the object from the extremities of the base, make with the base-line. The object, in short, is made the summit of a triangle in which two angles and the length of the side between them are known. Its distance from either end of the base can thus be ascertained by computation, and made available as a new and larger base. "Thus," says Sir John Herschel, in a paper in which this subject is handled with his usual lucidity,* "the survey may go on, throwing out new triangles on all sides, of larger and larger dimensions, till the whole surface of a kingdom or a continent becomes covered with a net-work of them, all whose angular points are precisely determined. The strides so taken, moderate at first, become gigantic at last; steeples, towers, obelisks, mountain cairns, and snowy peaks, becoming in turn the stepping-stones for further progress, the distances being only limited by the range of distinct visibility through the haze of the atmosphere." In mapping a country, after the net-work of great triangles has been thrown over it; the great spaces comprehended

* "Familiar Lectures on Scientific Subjects," p. 187. Lond. 1866.

by them are filled in by a system of smaller triangles, so as to carry the survey to any degree of minuteness that may be required.

It will have been seen, in regard to the first set of operations, that the chief requisite in measuring base-lines is such a *measure*, bar, rod, or chain as shall have fewest of those qualities, and be least subject to those conditions in the use, which are the sources of errors of measurement; and in regard to the second set of operations, that, as the triangles increase in magnitude, the means of making distant points steadily and distinctly visible are next in practical importance to the excellence of the instruments for measuring angles. It will be seen hereafter that Mr Drummond made most important contributions to geodesical science in regard to each of these sets of operations.

A sufficiently distinct notion has now, it is hoped, been conveyed of the sort of operations in which the Ordnance Survey engineers were engaged—the measuring of base lines on the one hand, and the work of triangulation on the other. Let us now glance at the history of these operations in Britain up to the time when Drummond took a part in them.

That the British Survey is an *Ordnance* Survey harmonises with the fact, that the first survey conducted in Great Britain had its origin, not in the interests of science and peace, but in the conditions of public safety and the purposes of war. It was begun shortly after the Rebellion of 1745, in a survey of the Highlands of Scotland, the want of an accurate knowledge of the country having been much felt by the king's troops. This survey was conducted by General Roy, with the help of a body of infantry, whose head-quarters were at Fort Augustus. Begun in the Highlands, it was ex-

tended over the south of Scotland, but it was done roughly and with imperfect instruments, and the results were never published. Thus it was, however, that practical experience in the art of surveying happened to be possessed in a high degree by military officers, and that, when survey operations on a grander scale and for higher purposes were resolved upon, military officers were naturally called upon to superintend them. A project for a *general* survey of the country was formed in 1763, but fell aside, to be renewed in 1783. In this year a representation was made from France to our Government, of the advantages which the science of astronomy would derive from the connection, through trigonometrical measurements, of the Observatories of Greenwich and Paris, and the exact determination of their latitudes and longitudes. The French had by this time carried a series of triangles from Paris to Calais, and what they proposed was that the English should carry a similar series from Greenwich to Dover, when the two might be connected by observations from both sides of the channel. The scheme was approved of by George III., and the English Survey begun by the measurement of an initial base-line at Hounslow Heath by General Roy—the foundation of the triangulation since effected of Great Britain. While, then, the officers who, from the first, superintended the geodesical operations in Great Britain belonged to the Engineers, and had been trained to the work in the interests of war, it is yet true that the British Survey, of which the measurement of Hounslow base was truly the commencement, had its origin in philosophical operations conducted in the interests of science, and directed mainly to the determination of the figure of the earth.

The measures employed in measuring the Hounslow

base were Ramsden's steel chain, 100 feet long; Riga pine wood rods, 20 feet long; and glass rods, 20 feet long, enclosed in wooden cases for protection. These measures were, all of them, liable to expansion and contraction from changes of temperature; while the rods were, moreover, affected by changes of the hygrometer. The rods, it was found, gained $\frac{1}{15}$th of an inch in length after a week of rain; which on the length of the base would have caused an error of about 45 inches. On the other hand, the chain, while it possessed many good qualities, was attended by not inconsiderable difficulties in the use. The base, however, was as carefully measured as with the instruments it could be, everything being done to prevent or allow for instrumental errors: its length, reduced to the level of the sea, was about $6\frac{1}{5}$th miles. A chain of triangles was then carried from the Hounslow base to Dover, connected with the Greenwich Observatory at one end, and at the other with a base of verification, which was next measured with Ramsden's chain at Romney Marsh. This base was about $5\frac{1}{2}$ miles long, and differed only by a few inches from its length as determined by triangulation from the Hounslow base. This completed the operations immediately required for the connection of the Observatories of Greenwich and Paris. But the survey of Great Britain, which from the first had been contemplated, being now resolved upon, the triangulation which had so far been made for purely scientific purposes, formed the basis of the survey of Kent and Middlesex. The Hounslow base was remeasured in 1791, General Roy having died in the previous year; and in 1792, and the two following years, the triangulation was extended southwards to the Isle of Wight. In 1794 a base of verification was measured on Salisbury

Plain with the steel chain, and the triangulation thence continued westward along the whole southern coast, till the triangles embraced Dorset, Devon, Cornwall to the Land's End, and even the Scilly Isles. The work had now assumed the distinct character of a national survey, under the direction of Colonel Mudge. By 1800 the larger triangles had in many districts been filled in, and several counties had been mapped. In 1801 the triangles were carried northwards, and a base measured in North Lincolnshire on Misterton Carr, it being part of the director's plan that a new base, for verification, should be measured every hundred miles. By 1806 the triangles embraced part of North Wales, and a base had been measured on Rhuddlan Marsh, near St Asaph.

While these operations were being carried on, others of a more purely scientific nature were conducted by the officers superintending the survey. The direction of the meridian had been determined at Dunnose and Beachy Head as early as 1794, and calculation made of the length of a degree of a great circle perpendicular to the meridian in latitude 50° 41′; great interest being taken at the time in the question, Whether the length of a degree increased in approaching the equator? The direction of the meridian had subsequently been traced far northwards, and in 1811 it was determined to prolong the line into Scotland. The French, who had moved the English to begin the work, were urging them on in its prosecution at once by precept and example. A meridian had been traced through France, and extended by Biot and Arago to the southernmost of the Balearic Isles. This arc it was proposed, with the assistance of the British geodesists, to terminate at Yarmouth. On the other hand, it was proposed that

the meridional line which had been traced through England should be followed northwards through Scotland to the Shetland Islands. On this being done, the French and English arcs together would stretch over upwards of 20°. These were great conceptions, and the operations for their realisation increased in difficulty the farther northwards they were extended. They not only required great skill in scientific observations, but the employment of immense personal energy. Captain, afterwards Colonel Colby, had by this time been long associated with Colonel Mudge in the survey, and possessed all the qualifications necessary for its delicate but arduous duties.

By the year 1817 the triangulation had been extended as far north as Aberdeen, near which, on the Belhelvie Sands, was measured the only base-line measured in Scotland. The triangles included the whole country northwards from Cumberland, embracing the Isle of Man and part of the coast of Ireland. In 1819, the year in which Drummond and Colby became acquainted, the latter had commenced operations north of Aberdeen, his "head-quarters" in the beginning of the season being placed on Corrie Habbie, a mountain in Banffshire. The survey officers were by this time a numerous and important body. Besides the staff employed in the work of triangulation and base measurements, there was another employed in filling in the spaces within the larger triangles by a system of smaller ones, and yet another employed as draughtsmen in embodying in maps the results of the measurements and calculations. The permanent head-quarters of the service were established at the Tower in London, where all the necessary offices for the work were provided. During the summer and

autumn months the officers engaged in the measurements were in the field or on the mountain. In winter they were quartered in London, engaged in calculations and in improving the apparatus employed in the survey.

The life of the officers who went "out" in the surveying season was an exceedingly trying one. It was a life of hardship and exposure; of frequent privation and fatigue; occasionally of hazard and adventure; a life to try the strongest, and certain to injure the less robust. The duties were twofold—station-hunting, and the work of observation. A country was to be rapidly traversed—for every day in the season was of value—and hill after hill to be ascended till the most eligible for a station of observation was discovered. The station was always on a hill top or mountain peak. The observatory once erected there, the officers made it their home; some of them made expeditions thence for the purpose of erecting flag-staffs on the hills as points for observation; while others, through all weathers, kept by the theodolite, ready to avail themselves of every favourable opportunity of observation. There is an admirable account of a surveying season in the Highlands in a letter from Major Dawson to Lieutenant-Colonel Portlock, published *in extenso* in Portlock's "Memoir of Colonel Colby." It was the season of 1819, from which Colby was just returning, when Drummond became acquainted with him. As germane to my present purpose I cannot refrain quoting here some extracts from this letter. In describing Colby's life in one surveying season, it describes the life which Drummond led for several seasons in "station-hunting" and the work of observation on mountains; and is all the more valuable as, during the years when he was leading this sort of

life, we have but few and far between glimpses of him.

With great labour and difficulty Colby, accompanied by his assistants, Robe and Dawson, and a selected party of artillerymen, established themselves and instruments in camp on the top of Corrie Habbie, in Banffshire, a hill about 2200 feet high, and in the centre of a mountainous country—Benrinnes, the Monagh Lea, the Cairngorms, and Ben Macdui being all in view. Here for some time Colby devoted to the work of observation every favourable moment from sunrise to sunset. In the intervals he instructed his assistants in the use of the instruments. Though the month was June, it was far from being summer weather on the Corrie. On the 28th June they experienced a tremendous storm of hail, which covered the ground with a coating several inches deep in a few minutes. "After this fell snow for an hour or so, and then sleet and rain. We were forced to be out shovelling the hail and snow from the tents while the storm lasted, and when it was over the men set to snow-balling one another as a means of warming themselves—a rather unusual amusement in the latter end of June." This was Dawson's first season on the mountain tops, and he made notes at the time of facts which must have afterwards become common-place to him.

"*Tuesday, 29th June.*—Captain Colby took Robe (Lieutenant) and a small party of the men on a 'station-hunt,' or pedestrian excursion, to explore the country along the eastern coast of Inverness-shire, Ross-shire, and Caithness, and to erect objects upon some of the principal mountains, and select those which, from their position and circumstances, should be preferred for future encampments. That particular season of the

year was usually taken for the purpose, because, owing to the tremulous state of the atmosphere, it is unfavourable for instrumental observations, except occasionally for an hour or so after sunrise, and for a like period before sunset; at which times, unless the summit of the mountain chances to be free from clouds and mist, nothing really valuable, in the way of observation, can be done. The opportunities afforded for the purpose are indeed extremely capricious and uncertain at other times also. It was no uncommon occurrence for the camp to be enveloped in clouds for several weeks together, without affording even a glimpse of the sun or of the clear sky during the whole period; and then in a moment the clouds would break away or subside into the valleys, leaving the tips of the mountains clear and bright above an ocean of mist, and the atmosphere calm and steady, so as to permit the observations, for which the party had waited days and weeks, to be taken in a few hours. . . .

"*Wednesday, 21st July.*—Captain Colby and Robe returned to camp, having explored all the country along the eastern side of the counties of Inverness, Ross, and Caithness, as well as the Mainland of Orkney, and having walked 513 miles in twenty-two days.

"*Friday, 23d July.*—Captain Colby took me and a fresh party of the soldiers on a station-hunt, to explore the country to the westward and northward of west. Our first halting-place was to be Grantown, at a distance of twenty-four miles, and Captain Colby having, according to his usual practice, ascertained the general direction by means of a pocket-compass and map, the whole party set off as on a steeple-chase, running down the mountain-side at full speed, over Cromdale, a mountain about the same height as Corrie Habbie, crossing several beautiful glens, wading the streams which flowed through them, and regardless of all difficulties that were not absolutely insurmountable on foot. Sometimes a beaten road would fall in our course, offering the temptation of its superior facilities to the exhausted energies of the weary members of our party; and in such cases freedom of choice was always allowed them. Captain Colby would even encourage such a division of his

party, and the spirit of rivalry which it induced, and took pleasure in the result of the race which ensued. Arriving at Grantown in about five hours and a-half, we dined there, and proceeded afterwards along the valley of the Spey by the high road to the Aviemore Inn to sleep. The distance travelled by us that day was calculated at thirty-nine miles.

"*Saturday, 24th July.*—Started at nine o'clock. I was dreadfully stiff and tired from the previous day's scramble, and with difficulty reached Pitmain (thirteen miles) to dinner. . . . Garviemore Inn, distant eighteen miles, was to be our next stage, and I really thought it was more than I could accomplish that day; but Captain Colby said it was not. It was his intention, however, to leave the beaten road immediately, and crossing a rough, boggy tract of country to the northward, to gain the summit of Cairn Derig, a mountain about 3500 feet high, and about ten miles distant, and having built a large pile of stones upon it, to proceed again across the country to Garviemore. [Dawson thought this quite beyond his powers, but Colby insisted it was not, and he had to proceed.] I kept pace with him throughout the remainder of the day, and arrived at the inn at half-past eleven o'clock at night, much more fresh than at the end of our first stage the day before. . . . The distance travelled that day was forty miles.

"*Sunday, 25th July.*—There being no church, we strolled out soon after breakfast to see the country. From the opposite side of the road, to the southward, the ground rises suddenly to the height of about 1500 feet. This we ascended, and found, as is frequently the case, an eminence of greater elevation behind it. Having gained this second elevation, a third appeared, and so on to others in succession, though frequently in pursuing our straight course we had to descend rocky valleys, and thus to lose in a quarter of an hour the elevation which it had cost half an hour's severe climbing to attain. In this way, however, we at length reached the summit of Bui-Annoch, a mountain rising suddenly from the wooded shores of Loch Laggan to the height of about 4000 feet. From that point we gained a splendid view of the western hills for which we were bound—a white and serrated range extending from the west to

the northward as far as the eye could reach. . . . I have traversed Switzerland, and the view of the Alps is, in my opinion, scarcely more imposing than this. . . . After dwelling upon it for an hour or two, and refreshing ourselves with a copious draught from a pure spring, surrounded with icicles and snow, we returned to Garviemore, having walked about four-and-twenty miles, and attained so great an elevation on the day which should have been our day of rest."

Monday, 26th July.—The party started soon after daybreak, crossed Corrie-arrack, 2000 feet high, descended on Fort Augustus, and proceeded in a north-westerly course to Cluny, where they got neither beds nor supper.

Tuesday, 27th July.—Breakfasted at Invershiel, at the head of Loch Duich; ascended, and built a conical pile on the summit of Scour-Ouran, a high mountain to the north-east, and returned to the inn at Invershiel to sleep.

Wednesday, 28th July.—Crossed the Maum-Rattachan to Kyle-Rhea, thence to Broadford in Skye, and on to Sconser—a distance of thirty-two miles.

Thursday, 29th July.—Attempted to reach the summit of the Coolin Hills, but were completely foiled in the attempt. "Not being provided with ladders or ropes, the perpendicular rock at the summit baffled our efforts for several hours to find a crevice by which to ascend it. We gained, however, a ridge which reaches out from the perpendicular cliff, with a superb column at the extremity of it, and so narrow is the ridge that we were obliged to sit astride upon it, in which position little more than the strength of an infant was required to hurl a stone to the bottom of the corrie on the south side without impinging on the face of the cliff, a depth of about 2000 feet.

"*Friday, 30th July.*—Went to Portree, ascended a range of hills above it, and erected a pile of stones upon one of them, and returned to Sconser.

"*Saturday, 31st July.*—A bright morning at daybreak, and we were on foot again to make a fresh attempt on Scour-na-Marich, another head of the Coolin range, which Captain Colby had singled out for the purpose on the former occasion; and this time our efforts were crowned with success. Having

built a large pile upon it, we returned to our inn to breakfast, which, by that time, we stood much in need of, and, hiring a boat, we proceeded direct to Jeantown, at the head of Loch Carron."

From Jeantown the party made for Letterew on the northern shore of Loch Maree; and having explored the country to the eastward, building piles upon the mountains which were best placed, they made for Loch Fannich, and thence to Beauly and Inverness. From Inverness they made for Corrie Habbie, where they arrived on the 14th of August, having walked 586 miles in twenty-two days, including Sundays, and some days on which they were unable to proceed from bad weather.

A few days favourable for observation now enabled them to complete their observations on Corrie Habbie. So clear was the sky at this time, that one evening after sunset they saw the pile on Ben Nevis distinctly through the telescope, the distance being seventy-five miles in a right line. By the 3d of September they had established themselves on the top of Ben Wyvis, at a height of 3400 feet. From this station they looked back on Cairngorm, southwards on Ben Nevis again, and westwards on the piles recently erected on the Skye mountains. By the 18th September they occupied a new station on Ben Cheilt, two miles west of Latheron, in Caithness. From this they looked back on Ben Wyvis, now covered with snow. From Ben Cheilt they shifted to Ben Loch-cas-na-Cairoch, a mountain near Golspie. The station here was a perfect bog. "The season, too, had now changed; we had frequent and violent storms of hail, rain, and wind, which occasionally threw down some of the tents; but in the intervals the atmosphere

was clear, and allowed of the instrument being constantly at work." Their last station was at Tarbatness, where they finished their observations on the 29th of September. "The weather was now daily becoming more stormy and wet. The mountains were all covered with snow, and the trigonometrical season was declared to be at an end."

Such had been Captain Colby's life for many years, and such was now to be Drummond's. One would not readily think of romance in connection with the subject of triangulation. And, yet it may now appear not unnatural that the latter should raise expectations of the former. Indeed, to those who have read Mr Connolly's account of the share taken by the Sappers in the great triangulation, "The Romance of the Survey," as the title of a book of adventure, would no more sound strange than "The Romance of War." "The Station Hunters" may yet find a place among works of light literature.

CHAPTER VII.

SURVEY OPERATIONS, 1821-1825; DRUMMOND'S INVENTIONS; THE HELIOSTAT AND THE DRUMMOND LIGHT.

DRUMMOND was only in the twenty-third year of his age when he joined the Survey in the summer of 1820. Whether he went out in the trigonometrical operations of that year does not appear; in the following and several succeeding years he was actively employed on the great triangulation, in Scotland and England first, and afterwards in Ireland.

Probably, on arriving in London, he had again to pass through a period of "preliminary practical instructions." Fitness for the varied duties of the service was, to a large extent, to be acquired at the head-quarters at the Tower. For the discharge of many of these duties he must have been competent from the first.

In the season of 1821 he was in Scotland with Colby, Vetch (afterwards consulting engineer at the Admiralty), and Dawson, continuing the great triangulation northwards from Caithness, over part of which the triangles had been carried in the season of 1819. In the season of 1821 the triangles were thrown over Orkney and Shetland. The party made observations from eleven stations, including those upon "the two lone islands" of Faira and Foula, as they are called by Dawson in the letter already cited. The season was one of extraordinary labour. On the island of Foula, Colby,

"the chief," as his officers delighted to call him, experienced a sharp inflammatory attack, and had to send to Lerwick, on the east coast of Shetland, for leeches. His sufferings in the interval are described as having been almost beyond endurance. On recovering from this attack, he returned to the south (apparently accompanied by Dawson), to take part in observations arranged to be made in France by himself and Captain Kater, conjointly with MM. Arago and Mathieu. The work in the islands fell to be completed after his departure by Vetch and Drummond.*

How Mr Drummond was occupied in the season of 1822 is somewhat uncertain. Colby, Dawson, and Vetch were out on the west coast. They explored the whole range of the western islands from the Mull of Kintyre to the Butt of Lewis. Colby had again to return to engage in operations in the south; he left Vetch and Dawson to finish the Scotch observations in camp at the Mull of Oe. The operations in the south were in continuation of those in which Colby was engaged in the previous year along with Captain Kater. They were repeating the triangulation and measurements, which had previously been executed by General Roy, for the purpose of connecting the Observatories of Greenwich and Paris. In the mean time a party of the Survey officers, to which Drummond was probably attached, were engaged in operations in England. Ten stations were visited by this party, and observations for azimuth made at two of them; but in what district they were I cannot ascertain.

In 1823 Drummond was engaged along with Colby in carrying a chain of triangles northwards towards Cambridge, for the purpose of fixing upon the position

* Memoir of Colby, p. 63.

for its observatory. On this occasion Wrotham Hill, in Kent, and Leith Hill, in Surrey, were to be observed from Little Berkhampstead in Hertfordshire. There was great difficulty experienced in making these observations; the dense mass of smoke and fog which constantly envelope the metropolis, long defying every effort to pierce it. The observations were at last effected by means of an apparatus contrived by Colby. In the summer, Vetch and Drummond had been out on a station hunt; the fact is mentioned in two letters, belonging to this year, which have been preserved, but in neither of them is it stated what district was explored. The trigonometrical season was cold and wet, and though it lasted till the 14th of November, little work was done.* This was to be the last season, for many years, of the British survey. It was dropped, not to be resumed again till 1838.

The cause of the interruption was the survey of Ireland, which was resolved upon in June 1824. The object of the Legislature, in directing a new survey of Ireland to be made, appears from the Report of the Select Committee appointed in 1824, "to consider the best mode of apportioning more equally the local burthens collected in Ireland." The object was to obtain a survey sufficiently accurate to enable the valuators, acting under the superintendence of a separate department of the Government, to follow the surveyors, and to apportion correctly the proper amount of the local burthens. These burthens had previously been appor-

* His sister had by this time become a great invalid. In a letter, of date 20th November 1823, Drummond expresses joy at good news of her. "I shall look out for a pony chaise for her, and bring it down with me in the spring," a promise which he redeemed. All his letters show affectionate regard and anxiety for her.

tioned by Grand Jury assessments. The assessments had, in some districts of Ireland, been made by the civil division of plough-lands; in others by the division of town-lands; the divisions, in either case, contributing in proportion to their assumed areas, which bore no defined proportion to their actual contents. The result was great and much-complained-of inequality in levying the assessment, which it was a primary object of the survey to remove by accurately defining the divisions of the country. The Committee reported that it was expedient to give much greater despatch to this work than had occurred in the Trigonometrical Survey of England. They recommended that every facility in the way of improved instruments, should be given to the Ordnance officers by whom the survey was to be conducted; and concluded with the hope, that the great national work which was projected "will be carried on with energy as well as with skill, and that it will, when completed, be creditable to the nation, and to the scientific acquirements of the age."

This survey was to task to the full Drummond's powers of invention. When the trial came he was well prepared for it. From the moment when he joined the service he had striven with all his powers to qualify himself for advancing its interests. He had thrown his heart into it, and eagerly cultivated all those branches of knowledge which bore on its necessities. He betook himself with renewed energy to the study of the higher mathematics. He became devoted to chemistry. For years he used to rise at four or five o'clock in the morning, light his own lamp and fire, and, taking a cup of coffee, study without interruption till eight or nine, when official duties claimed his attention. The days thus early begun were utilised

throughout. He had a special subject of study for every interval of business, so that no portion of his time passed unimproved.

He had attended the chemistry classes in the University of Edinburgh. In London he resumed the study under Professors Brande and Faraday, whose morning lectures at the Royal Institution he for some time sedulously attended. His friend Dr Prout, an enthusiastic chemist, is supposed to have given him a bias towards this study. Be that as it may, Drummond prosecuted it with zeal, always on the alert in this field, as in every other, to make the knowledge he acquired available to the service.

General Larcom states that the use of lime for the Drummond light had its origin in a suggestion received at the Royal Institution. "The incandescence of lime having been spoken of in one of the lectures,* the idea struck him that it could be employed with advantage as a substitute for Argand lamps in the reflectors used in the Survey, for rendering visible the distant stations, because, in addition to greater intensity, it afforded the advantage of concentrating the light as nearly as possible into the focal point of the parabolic mirror, by which the whole light would be available for reflection in a pencil of parallel rays, whereas in the Argand lamp only the small portion of rays near the focus was so reflected. On this subject his first chemical experiments were performed. Captain Dawson recollects Drummond mentioning the idea when returning from the lecture, and that on the way he purchased a blowpipe, charcoal, &c. That evening he set to work with these simple means, and resolved that he would henceforth devote to his new pursuit the hour or two imme-

* Memoir, p. 5.

diately after dinner, when, he said, he could do nothing else, remarking how much Dr Prout had done during the intervals of active professional occupations."

We have Drummond's own more full account in a paper "On the Means of Facilitating the Observation of Distant Objects in Geodetical Operations," published in the "Philosophical Transactions" of 1826. It is prefaced by a brief sketch of the history of the use of lights in survey operations.

"In the beginning of the Survey, General Roy, on several occasions, but especially in carrying his triangles across the Channel to the French coast, made use of Bengal and white lights prepared at the Royal Arsenal; for these, parabolic reflectors, similar to those with which our lighthouses are supplied, and illuminated by Argand burners, were afterwards substituted as more convenient, but they have been gradually discontinued, the advantages derived from them proving inadequate, from their want of power, to the trouble and expense incident to their employment. In the trigonometrical operations of 1821, carried on by Colonel Colby and Captain Kater, conjointly with MM. Arago and Mathieu, for connecting the meridians of Greenwich and Paris, an apparatus of a very different kind was employed for the first time—a large plano-convex lens, 0·76 metre square, being substituted for a parabolic reflector, and the illuminating body an Argand lamp with four concentric wicks. The lens was composed of a series of concentric rings, reduced in thickness, and cemented together at the edges. This apparatus resulted from an inquiry into the state of the French lighthouses, and was prepared under the direction of MM. Fresnel and Arago. Its construction and advantages are explained in a 'Mémoire sur un Nouveau Système d'éclairage,' by M. Fresnel. The light which it gave is stated to possess 3¼ times the intensity of that given by the reflector. It was employed, during the operations alluded to, at Fairlight Down and Folkestone Hill, on the English coast; at Cape Blancez and Montlambert, on the French coast; the greatest distance at which it was observed being 48 miles, and

its appearance, I have understood from Colonel Colby, was very brilliant.

"But valuable as this apparatus may be when employed in a lighthouse, the purpose for which it was indeed invented and constructed, the properties of the simple parabolic reflector appeared to give it a preference for the service of the Trigonometrical Survey, provided a more powerful light could be substituted in its focus instead of the common Argand lamp.

"With this object in view, I at first endeavoured to make use of the more brilliant pyrotechnical preparations; then phosphorus burning in oxygen, with a contrivance to carry off the fumes of phosphoric acid, were tried; but the first attempts with these substances promising but little success, they were abandoned. The flames, besides being difficult and troublesome to regulate, were large and unsteady, little adapted to the nature of a reflecting figure, which should obviously, when used to the utmost advantage, be lighted by a luminous sphere, the size being regulated by the spread required to be given to the light. This form of the focal light, it was manifest, neither could be obtained nor preserved when combustion was the source of light; and it was chiefly this consideration which then led me to attempt applying to the purpose in view the brilliant light emanating from several of the earths when exposed to a high temperature; and at length I had the satisfaction of having an apparatus completed, by which a light so intense was produced, that when placed in the focus of a reflector, the eye could with difficulty support its splendour even at the distance of forty feet, the contour of the reflector being lost in the brilliancy of the radiation.

"To obtain the requisite temperature, I had recourse to the known effect of a stream of oxygen directed through the flame of alcohol* as a source of heat free from danger, easily procured and regulated, and of great intensity.

"To ascertain the relative intensities of the different incandescent substances that might be employed, they were referred, by the method of shadows, to an Argand lamp of a common standard, the light from the brightest part of the flame being

* Annals of Philosophy, vol. ii. p. 99.

transmitted through apertures equal in diameter to the small sphere of the different substances submitted to experiment.

"The result of several trials made at the commencement gave for

Lime,	37 times,
Zirconia,	31 „
Magnesia,	16 „

the intensity of an Argand burner. The oxide of zinc was also tried, but besides wasting away rapidly, it proved inferior even to magnesia.

"Of these substances, and also of their compounds with one another, lime appearing to possess a decided superiority, my subsequent experiments were confined to it alone; and by a more perfect adjustment of the apparatus, by bringing the maximum heat, which is confined within narrow limits, exactly to the surface of the ball, and by using smaller balls than those employed in the early experiments, a very material increase of light has been obtained. The mean of ten experiments, made lately with every precaution, gives for the light emitted by lime, when exposed to this intense heat, eighty-three times the intensity of the brightest part of the flame of an Argand burner of the best construction and supplied with the finest oil. The lime from chalk, and such as is known at the London wharves by the name of flame lime, appears to be more brilliant than any that has been tried."

It thus appears that before he had thought of any of the earths as a means of light, he had been experimenting with various pryotechnical preparations and chemical stuffs as lights to be used with the reflector, and had been perplexed by the shape and unsteady character of the flames; in fact, had his attention particularly fixed on the very difficulty from which the use of an earth offered escape. Experiment, in short, had brought him to the point at which he was fully prepared to picture the lime ball in the focus of the reflector the

moment he should think of it—or have it suggested to him—as a source of light.

The use of the Argands by Colby and Kater in 1821, may have first directed his attention to this subject. I think it is certain that he was engaged in his experiment in the winter of 1823, and probable that the fact was one of the reasons why Colby selected him to be his right-hand man in his preparations for the Irish survey. The chief was anxious that this survey should be more perfect than any yet executed, and particularly desirous to obtain improved means of overcoming the difficulties of observation which, it was anticipated, would be encountered in Ireland, at once owing to the climate and the size of the triangles. These means Drummond seemed to be likely to furnish; a light he had ready to hand, and was working to fit it for use on the survey; the other thing most wanted was a heliostat—a means of continuously reflecting the sun's rays from one point to another. And this Drummond supplied in the course of 1824 and spring of 1825.

In the paper already cited, he gives a brief sketch of the history of the use of the sun's reflection as an aid in survey operations:—

"The reflection of the sun from a plane mirror, as affording a point of observation that might be seen at remote distances, was suggested and employed by Professor Gauss in 1822, while engaged with a trigonometrical measurement in Hanover; and the result of the first trials made at Inselberg and Hohenhagen rendered it highly probable that it might be applied with much advantage to this purpose.

"The principle was adopted in this country when Colonel Colby and Captain Kater were engaged, in 1822, in verifying General Roy's triangulation connecting the meridians of Paris and Greenwich. At their concluding station on Shooter's

Hill seven or eight days had elapsed, during which Hanger Hill Tower, though only ten miles distant, having remained completely obscured by the dense smoke of London, tin plates were attached to the signal post, so as to reflect the sun towards the station at stated times on a certain day.

"At the hours for which they had been calculated these plates became visible, and the observations were in consequence immediately and easily completed. In the subsequent operations of 1823, recourse was again had on two important occasions to the same method, and with equal success. I allude to Leith Hill, near Dorking, in Surrey, and Wrotham Hill, in Kent, stations which it was of the utmost consequence to observe from Berkhampstead Tower, near Hertford. Our efforts to effect these observations having for some time been rendered unavailing by the thick mist so frequently overhanging the bed of the Thames, a series of bright tin plates was put up on both stations. Each set, consisting of six or eight plates, was attached to a smooth flat board, placed vertically by the plumb line, and turning on a pivot; the respective inclinations of the plates with the face of the board being determined, so that they might have the positions required for reflecting in succession the sun's rays towards Berkhampstead Tower, when the surface of the board was turned at right angles to the line of direction. Although this method admitted but of rude execution, it fully answered the purpose for which it was employed; the plates became visible in succession at the appointed hours, the duration of each varying with the inequality of its surface, but being generally from ten to fifteen minutes; they were seen nearly at the same hours for some days before and after that for which they were calculated.

"The distance to Leith Hill is forty-five miles, and the observations were in this way completed without the hill itself having been visible during the whole of our stay, which was nearly three weeks."

The utility of employing the sun's reflection as a point of observation being established by the result of these experiments, the problem to which Drummond

addressed himself was to invent an instrument, simple in its construction and easy of management, which might be used on all occasions and at any station. Colby's plates were a temporary expedient, suited only for the particular place and time for which the angles of the plates were calculated. The same pole and set of plates answered only for a single station and a short time, owing to the rapid motion of the sun, or rather of the earth in its orbit, quickly throwing the reflections wide of the station of observation.

Drummond's solution of the problem was as simple as it was happy and ingenious. His heliostat consisted of a mirror connected with two telescopes; the one, forming the axis of the instrument, for looking towards the station of observation, the other for looking at the sun. The former telescope being turned on the station, and brought, along with the mirror, to a position of horizontality by means of screws and spirit-levels, the mirror was so connected with the latter telescope, that, as the telescope was turned to the sun, the mirror, moving with it, went into position to reflect the sun's rays to the station of observation. It was a problem of geometrical construction prettily solved. He had done many as difficult in the class of Professor Leslie; but this one was of his own proposing, and its solution proved of the highest practical importance. He made improvements on the instrument afterwards, which we shall notice in the proper place. The heliostat and the apparatus for exhibiting the light in survey operations, are fully described in the paper in the "Philosophical Transactions."

By these two inventions Drummond armed the Survey officers with the most powerful means of overcoming the difficulties of observation by day and night. The

light was not long till it made a sensation beyond the small circle of the corps; in the scientific world its splendour and utility were at once acknowledged. "It is with a melancholy pleasure," says Sir John Herschel,* "that I recall the impression produced by the view of this magnificent spectacle as exhibited (previous to its trial in the field) in the vast armoury in the Tower, an apartment 300 feet long, placed at Mr Drummond's disposal for the occasion. . . . The common Argand burner and parabolic reflector of a British lighthouse were first exhibited, the room being darkened, and with considerable effect. Fresnel's superb lamp was next disclosed, at whose superior effect the other seemed to dwindle, and showed in a manner quite subordinate. But when the gas began to play, the lime being now brought to its full ignition and the screen suddenly removed, a glare shone forth, overpowering, and, as it were, annihilating both its predecessors, which appeared by its side, the one as a feeble gleam, which it required attention to see, the other like a mere plate of heated metal. A shout of triumph and admiration burst from all present. Prisms to analyse the rays, photometric contrivances to measure their intensity, and screens to cast shadows, were speedily in requisition, and the scene was one of extraordinary excitement." It must have been a proud moment for the inventor when he witnessed this enthusiasm in the elite of London scientific society. But there was a prouder in reserve for him—the triumph of his light and heliostat over obstacles to observation, which for months had impeded the progress of the Survey.

The first step in the Irish Survey was a "general

* Letter to Mrs Drummond.

reconnaissance" of Ireland made by Colby and Drummond in the autumn of 1824. They traversed the country from north to south, fixed upon the mode of conducting the survey, and selected the stations for the great triangulation, as well as the most fitting place for measuring a base. Enough has been seen of Colby's manner of making a reconnaissance of a country, to enable the reader to judge what exposure and fatigue were suffered in this expedition.

In the autumn of 1825 the triangulation commenced on the Divis mountain, near Belfast. Officers were sent into Cumberland and the Isle of Man to recover and erect marks on the old stations there as points of observation from Divis for the connection of the Irish and English Surveys. While they were on this duty, Drummond, with his heliostat, light apparatus, and a complete observatory of meteorological and other philosophical instruments, was encamped on Divis preparing the station for the great theodolite. On the 23d of August a conspicuous object was placed on the summit of Slieve Snaght, the highest hill of Innishowen, about 2100 feet above the sea. This was an important point in the triangulation which connects the north of Ireland with the western islands of Scotland, and it was necessary that it should be observed from Divis. The party of observers on Divis were in camp as early as the date of marking Slieve Snaght. They continued there till the 26th October without being able to make the necessary observation. The mountain continued enveloped in a haze so impenetrable as to render unavailing every effort made for the purpose. All this time it seems not to have occurred to put either the heliostat or light in use. But now, late as it was in the season, Colonel Colby determined that Drummond

should ascend the mountain, and attempt to overcome the formidable obstacle to the completion of the observations by the aid of his apparatus. He did so, and with what success we may see in the narrative of General Larcom :—" Mr Drummond took the lamp and a small party of men to Slieve Snaght, and by calculation succeeded so well in directing the axis of the reflector to the instrument on Divis, that the light was seen, and its first appearance will long be remembered by those who witnessed it. The night was dark and cloudless, the mountain and the camp were covered with snow, and a cold wind made the duty of observing no enviable task. The light was to be exhibited at a given hour, and to guide the observer, one of the lamps formerly used, an Argand in a lighthouse reflector, was placed on the tower of Randalstown Church, which happened to be nearly in the line at fifteen miles. The time approached, and passed, and the observer had quitted the telescope, when the sentry cried, 'The light!' and the light indeed burst into view, a steady blaze of surpassing splendour, which completely effaced the much nearer guiding beacon. It is needless to add that the observations were satisfactorily completed, the labours of a protracted season closed triumphantly for Drummond, and the Survey remained possessed of a new and useful power."

This year's operations did grievous mischief to Mr Drummond's health. A residence on the top of Slieve Snaght at such a season of the year might have tried one more robust. He was borne up for the time by the excitement attending the first practical test of his inventions, only to suffer the more severely afterwards. With what joy he hailed the success of his operations on the lonely mountain we fortunately may see from a

letter written in his hut on the night of November 11, 1825. In the moment of success his first thought was to communicate the pleasure of it to his beloved mother:—

"SLIEVE SNAGHT,
"*Friday night, Nov.* 11, 1825.

"MY DEAR MOTHER,—What has become of Tom? and why does he not write? are questions which you may of late have not unfrequently asked, and, I dare say, without any one being able to give a very satisfactory answer. Why, then, I am perched upon the top of Slieve Snaght (the Snowy Mountain), 2100 feet high in the centre of Innishowen, the wildest district in Ireland. Since the 23d of August, when a pole was placed on this hill, we have endeavoured to observe it from Divis, near Belfast, on which our tent was placed, but in vain. Constituting an important point in the triangulation of Ireland, our sojourning on the hill-tops has been prolonged to an unusually late period, in the daily hope that it would have been visible. Disappointment, however, was our lot, and the weather becoming broken and tempestuous, the colonel determined upon breaking up the camp and retiring to winter quarters. Just at that moment a letter was received from one of our officers encamped on Knock Layd, a hill about 40 miles distant, giving a splendid description of the solar reflection which I had exhibited to him, and which had been seen through a very hazy atmosphere, and seen for a time with the naked eye; and one of our officers tells me that the country people, whom curiosity had attracted to the spot on hearing the distance at which it was placed, actually raised a shout of exultation at its brilliant appearance. This being known at Divis, it became a question whether Slieve Snaght should be attempted at this season; and after due deliberation, it being decided that it should, I made a forced march upon this place, and, leaving Belfast on Tuesday forenoon, slept on this mountain on Thursday night, the 27th October, our tents erected, and hut constructed, and all the apparatus of the lamp ready for work. For the first week our life was a struggle with tempest—our

tents blown down, our instruments narrowly escaping, and ourselves nearly exhausted. At length, by great exertions, we got two huts erected, one for the seven men who are with me, the other for me—a lonely and humble dwelling, it is true, and now that the snow has fallen, so completely covered up that it is not very easily distinguished; nevertheless affording good shelter, warm and comfortable, and, at the present moment, *with a good peat fire*. The weather at length improved, and Wednesday the 9th instant brought our exertions to a successful termination. The colonel, after making the necessary arrangements, took his departure for London on the very day I arrived here, leaving Murphy and Henderson to keep a constant look-out for the lights. Their assiduity has been unremitting, and their fatigue by incessant watching not a little. This day brought me a letter from Murphy, which begins thus: 'Your light has been most brilliant to-night for three hours and twenty minutes, as was your solar reflection to-day. I began by giving you the pleasing intelligence in a condensed form, but now I must most heartily congratulate you, my dear friend, on the complete success which has thus crowned your very ingenious and laborious exertions for the good of the service. I trust they may eventually prove as beneficial to yourself. I really feel sincere pleasure in making you this communication. I will now give you some details. I first had notice of your appearance from Elliot, who called out that he saw the light, and in fact, though five times more remote, you were much brighter and larger than the Randal's tower reflector.' I have given you a long extract, because I think it will interest and please you. I have only to inform you now that the distance in a straight line between the two places is about 67 miles. I had a letter from the colonel to-day in London, very anxious to know the result of our labours. To-morrow I commence my retreat; on Monday I shall be in Derry, where I shall have to remain a day. . . . . From Derry I proceed to Belfast, where I shall be detained two or three days, and then I make direct for Edinburgh. At Belfast I entreat you to let me hear from you, and I am anxious to hear how Eliza bore the journey from Callendar, and how

the house is. My last intelligence is her own letter, which I received about the 19th ultimo, on the evening succeeding a gale of wind, which overthrew two of our marquees, and set fire to our cooking-house. I have written you, my dear mother, a long and gossipping letter, and it being now three o'clock in the morning, it is fit that I should stop. To John and Eliza my kindest love, and to Eliza my best thanks for her kind letter. If may amuse my aunt to read this letter to her, and tell her that I add my best regards.—And now, my dear mother, believe me your affectionate son,

"T. DRUMMOND."

This chapter, composed mainly of quotations, must be concluded by another from the Memoir of General Larcom :—

"The triumphant success which attended the lamp and heliostat at the close of 1825, was purchased at the cost of a severe illness. A mountain camp, at an altitude of two thousand feet in the winter of these climates, is, under any circumstances, a severe trial; but Drummond and his little party were peculiarly exposed. Few in number—being merely detached from the general camp at Divis—they were ill able to buffet with the storms of these wild regions; and the tents were so frequently blown down, that after the first few days they abandoned them, and constructed huts of rough stones, filling the interstices with turf. Such, without the additional luxury of a marquee lining, was the study and laboratory on which depended the success of the new instruments. Here were to be performed the delicate manipulations their adjustment required. Here was to be manufactured the oxygen destined for the portable gasometer; and, cowering over the fire, or wrapped in a pilot coat, was Drummond day and night at work. A frame and system attenuated by fatigue and excitement were ill able to bear up against such exposure. He struggled to the last; but no sooner had his efforts been crowned with success than he sank, and a severe illness compelled him to return to Edinburgh, to the care of his family and friends."

CHAPTER VIII.

SURVEY OPERATIONS, 1825–1828; SIMPLIFIED FORM OF THE HELIOSTAT; THE MEASURING BARS; THE BASE AT LOUGH FOYLE.

THE period of invention and improvement which preceded the commencement of the Irish Survey had other results besides those which have been described. To procure apparatus which would secure rapidity and accuracy in the work of the great triangulation, was not the only object in view. It was designed that the Irish Survey should be a more general Survey than any that had yet been made; should embrace not only geodetical facts, but also facts meteorological and topographical. The Engineer officers were becoming good physicists as well as good surveyors, and, while discharging their more immediate duties, were in various ways promoting the interests of science. The topographical department grew in importance as the work of the Survey proceeded. It owed most in the course of its development to General Larcom, who possessed special qualifications for advancing this branch. He unites literary and antiquarian tastes with an aptitude at once for science and for the work of administration. The department which Drummond created and fostered was that of meteorology.

During the period of preparation scarcely an instrument existed which Drummond did not consider with

a view to rendering it useful in the Survey; and for him to consider an instrument was to attempt to improve it. He long tried to improve the barometer. His favourite construction was the syphon, and he made one with his own hands which performed remarkably well. In the course of his experiments, he devised a singular mode of bisecting a reflected image of the surface—a ghost, as he called it; but it did not help him to any practical result. He at length, says General Larcom, abandoned the subject from a conviction, to use his own words, "that the errors to which the barometer was liable from causes beyond control, were greater than the quantities he had been dealing with."

The elaborate collection of instruments which he brought together in the meteorological observatory on Divis—the first Irish station—is said to have presented a singular spectacle on the mountain top. He carefully observed and recorded them, till the observatory was destroyed by a calamitous storm.* "The season on Divis," says Colonel Portlock, "was indeed a noble one. The camp became a school not merely of geodetical but of meteorological science. And though the difficulty of moving the delicate instruments from hill to hill, and preserving them from injury amidst the mountain storms, obliged Colonel Colby to abandon the use of some of them in subsequent stations, enough were retained to add the skill of practice to the theoretical knowledge which had been acquired at that first and most instructive station." It is characteristic of Colonel Portlock that he should say not one word of Mr Drummond in connection with this "noble season" and "most instructive station." He gives the whole credit to "the chief," and has none for the projector and creator of the

* The Larcom Memoir, p. 6.

meteorological department. In a parliamentary sense, it is the general who wins all the battles.

Till the spring of 1826, Mr Drummond remained invalided with his relations in Edinburgh. He was too weak this winter for severe study; but he managed, notwithstanding, to effect a variety of improvements in his light apparatus, which he was bent on fitting for lighthouse use. In the spring he returned to London, where he was occupied during the summer and autumn in experiments for forming the new *measuring* bars with which it was intended to measure the base at Lough Foyle. Late in the autumn he again took the field. The station this year was Slieve Donard, in the County Down. Drummond joined the camp in October, and continued there till late in November. As in the previous year, the tempests were fearful, and must have grievously tried his already weakened constitution.

In the course of the summer he had greatly simplified his heliostat. In the instrument as first devised, the direction was determined by one telescope which pointed to the station of observation, while the motions of the mirror connected with it were determined by another telescope with which the attendant followed the sun. This heliostat was very effective, but somewhat troublesome. It had been part of the original plan to give it a divided circle by which its direction could be fixed; but this was not done, so that in practice a theodolite had to be used in connection with it. But if the theodolite was to be used, the directing telescope might clearly be dispensed with. By an ingenious contrivance, Mr Drummond dispensed with both telescopes, and reduced the heliostat to a simple mirror connected with a stand by a ball-and-socket-joint, so as to admit of

being readily turned in any direction. The direction of the station of observation being marked by a line on the ground, a small flat brass ring was placed in the direction at about 20 or 30 feet from the heliostat, and the attendant had nothing to do but to move the mirror till the sun's rays fully illuminated the ring before him. At short intervals, as the illumination grew faint, he had to move the mirror slightly till the brilliancy was restored. At the station of observation the light, reflected through the ring, appeared like a star. To this simple form he reduced the heliostat in time for its being employed in the season of 1826.

The instrument, in this form, was most efficient. It was used with success at distances exceeding a hundred miles—from Precelly, in South Wales, to Kippure, in Wicklow; from the Keeper, in Tipperary, to Cullagh, in Fermanagh. It was so easy of management that it could be put in position and adjusted, from a few calculated distances, by a common point-fixer using a measuring-tape and mason's level. This was done at Cnocanafiion, in Waterford, which was thus observed from Bartrigaum, in Kerry, a distance of more than ninety miles. The instrument was rendered portable by reducing the size of the mirror. Packed with the directing-ring in a leathern case, the point-fixer slung it over his shoulders, marched with it to the station, and there set it up screwed on to the top of a stick. Besides rendering low and obscure stations readily visible, it subserved another important purpose. It was a means of *identifying* stations—a matter of great importance in extensive surveys. The point-fixer and observer simultaneously noted and recorded the times of observation, and from the record, the station, if lost, could easily be recovered. The heliostat, in this shape,

remained ever after in use on the Survey, and was found more and more useful with every season's experience. If the Drummond light was not often employed, it was because the heliostat rendered resort to it unnecessary.

We now come to the operations of 1827 and 1828, and the inventions connected with them. In these years Mr Drummond was engaged in measuring the celebrated base of Lough Foyle—the most accurately measured base in the world, as Sir John Herschel assures me, except perhaps that measured by Maclear at the Cape by means of the same measuring apparatus. The site of the Lough Foyle base is on the eastern border of Lough Foyle; its northern end being in the parish of Magilligan, in the county of Londonderry, and its south end in the parish of Tamlaght, in the same county. The line crosses the river Roe, which is about 450 feet broad. The length of the base was 34,028·5 feet.

The merit of this work turns on two distinct classes of devices. The first are those connected with the self-compensating measuring bars which were employed in the measurement of the base; and the second are those connected with the process of measurement itself, and employed for testing and securing its accuracy as it went along.

In using simple rods or chains in measuring a base, it was necessary to determine the length of *the measure* at some definite temperature, and to reduce the measurement made at any other temperature to its equivalent at the standard one. Thermometers placed in contact with various parts of *the measure* were carefully observed, the temperature recorded, and a reduction made according to the experimentally ascertained rate

of dilation or contraction of the substance of which *the measure* was composed. Of course, every care had to be used to prevent changes in the length other than those due to temperature, *e.g.*, changes due to bending or twisting. Such care being taken, a great degree of accuracy was obtainable in measuring with simple rods or chains, through making the necessary corrections for variations of temperature as the process proceeded. The corrections that thus constantly fell to be made were, however, not a little precarious, and were, moreover, unquestionably most annoying.

The bars with which the base at Lough Foyle was measured were so constructed as to be self-compensating for changes of temperature. Certain points near their extremities maintain the same distance from one another at all temperatures.

The fact that different metals expand under heat at different rates had previously been made use of in various ways to maintain the constancy of the distance between two points. Graham, the inventor of the mercurial pendulum, was the first to turn the fact to practical account; while by his experiments, published in the "Philosophical Transactions" for 1715, he laid the foundation for the subsequent inquiries and improvements which led up to the measuring bars. His pendulum consisted of a steel rod, carrying a jar of mercury at its extremity. The upward expansion of the mercury counteracted the downward expansion of the rod, and kept the centre of oscillation always at the same distance from the centre of suspension. Mr John Harrison's gridiron pendulum was the next application of the fact, and seems to have been executed without the least knowledge of what Mr Graham had done before

him.* He secured the constancy of the distance between the centres of suspension and oscillation by such an arrangement of sets of steel and brass rods in the same plane, that the upward expansion of the one set was counteracted by the downward expansion of the other. After him, Mr Frotheringham, M. Deparcieux, and Mr Elliot, much about the same time (1738), independently constructed compensation pendulums, consisting of two bars, one of brass and the other of steel, fastened together by screws, with an arrangement of levers to raise or let down the pendulum bobs. In these the compensation was effected *at the extremity* of the bars, and not, as in the gridiron pendulum, at the centre. After this date, there were numerous beautiful contrivances introduced, for the purpose of eliminating the errors to which pendulums of this construction were found to be liable. We see, then, that a century of invention had been devoted to the subject of compensation for changes due to temperature, in combinations of steel bars and brass bars for pendulum purposes, before the subject was thought of in connection with geodesy.†

The French geodesists were the first to employ compound measuring bars to measure base lines. But in the French bars, the unequal expansion of metals was not used to secure the constant length of the measure. These compound bars, by an ingenious device, were made to measure and *indicate* their variations in length due to temperature, so that the use of the thermometer in connection with them was superseded. They regis-

* See a Paper contributed by Mr Short to the "Philosophical Transactions" for 1752.

† See Yolland's "Account of the Measurement of the Lough Foyle Base," p. 7. Lond. 1847. Longman and Co. 1 vol. 4to.

tered their own errors. The idea of forming self-compensating measuring-bars originated in England. There is no doubt its author—whether he was Colby or Drummond—knew of Harrison's gridiron pendulum; and that whatever of originality there was in the idea lay in the plan for effecting the compensation for temperature *at the extremities* of the bars. Harrison's pendulum was in common use; and that self-compensating compound bars might somehow be formed, was as obvious as that pendulum was familiar. It seems to be generally admitted that the inventor of the measuring bars was altogether unacquainted with the pendulums of Elliot, Frotheringham, and Deparcieux.

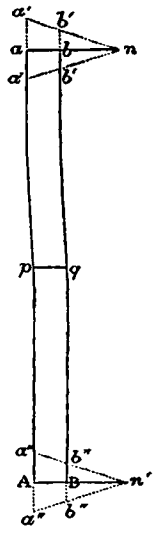
The manner of effecting the compensation at the extremities of the Colby-Drummond bars was exceedingly ingenious. But, before describing it, let us see how it was possible that the compensation could be effected.

If two bars of different metals be solidly connected at the centre, they will expand or contract together when exposed to the same thermometric changes. Suppose them to be made *of the same length* at some definite temperature. The question is, Is it possible to fix points, one at each end of the bars, to mark that length, however the bars themselves may expand or contract under changes of temperature?

Let A a, B b be the bars, and let them, at that temperature at which they are equal in length, be solidly connected in the middle at p q; and let A a be that whose rate of expansion and contraction is the greater. Then, if we join the extremities of the bars a, b, and A, B, there are points n, n', in the lines a b and A B produced, through which lines joining the extremities of the bars at any other temperature must always pass,

provided the increments, or decrements, of the bars, due to changes of temperature, are produced in the same time.

Let $a\,a'$ be the increment or decrement of $p\,a$ for any increase or decrease in temperature, and $b\,b'$ the corresponding increment or decrement of $q\,b$. Join a', b', and produce the line $a'\,b'$ till it cuts the line $a\,b$ produced in n. In the triangles $a'\,a\,n$, $b'\,b\,n$ we have



$$a\,a' : a\,n :: b\,b' : b\,n$$

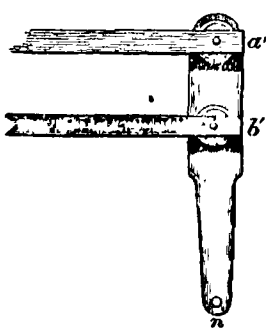
or, $$a\,a' : b\,b' :: a\,n : b\,n$$

i.e. the increment or decrement of bar $p\,a$: the increment or decrement of bar $q\,b$ :: the distance of n from bar $p\,a$: its distance from bar $q\,b$. Now, if $a\,a'$, $b\,b'$ increase and diminish together at the same rate in time, so as to leave the ratio $a\,a' : b\,b'$ always the same, it appears that the ratio $a\,n : b\,n$ will also be constant. In other words, the point n will be *a fixed point*, through which a line joining the extremities at any temperature must always pass. And, the like conditions being satisfied, there will be a corresponding fixed point n' at the other extremity of the bars.

The Colby-Drummond bars were made on this principle, and were accompanied by a contrivance at each extremity for always marking the points in the bars n, n', which are called *the compensated points*. These are always at the same distance from one another, viz., the length of the bars when equal. This length was 10 feet 1·5 inch. The bars were composed, the

one of brass, and the other of iron; they were half an inch broad, one and a half inch deep, and placed 1·125 inch apart. They were firmly fixed together at their centres by transverse steel cylinders, and free to expand from or contract towards their centres, independently of each other. They were, of course, provided with proper supports to prevent bending; but these, and the protections provided for the rods when in use, need not here be described. The bars, and the compensation microscopes which were used along with them, are fully described by Captain Yolland in his "Account of the Measurement of the Base of Lough Foyle." There were in all six sets of compensation bars formed, and seven compensation microscopes.

A notion of the contrivance for marking the compensated points may be obtained from an inspection of the annexed figure. $a'n$ is a flat steel tongue, at right angles to the bars at their extremities, when they are of equal length. The tongue moves freely on conical pivots rivetted into the bars, the axes of the pivots being perpendicular to the surface of the tongue, and allowing it to be inclined at slightly different angles to the bars, according as they expand or contract. On the tongue, and flush with its surface, near the extremity n, a silver pin, with a dot marked upon it, indicates the compensated point. From its capacity for free motion, this tongue represents, as it were, the line joining the points a', b', and



the dot at the point n represents the point through which that line always passes.

To complete this general account of the measuring apparatus, it is necessary to refer to the compensation microscopes, which are used along with the bars. A great degree of accuracy in the measurement might have been attained without complicating the apparatus by the employment of the microscopes. But without them the bars must have been brought together in the measurement, so that the compensated point at the end of the one might be superimposed on the corresponding point at the end of the other. And, in effecting the superimposition, there would be danger of the end of one bar being accidentally moved against that of another, and thence of disturbance in making the alignment and contact. To avoid this, an interval of six inches was left between the compensated points on the adjoining bars; and to bridge the interval, it was necessary to employ instruments having the principle of compensation applied in their construction, as in that of the measuring bars themselves: hence the compensation microscopes. Each of them consists of three microscopes embraced by two bars, one of brass and the other of iron; one microscope in the centre, called the telescopic microscope, and one at each extremity of the including bars, at a distance of three inches from the central microscope. The two bars, carrying with them the outer microscopes, are free to expand from, or contract towards, the central microscope, independently of each other; and thereby to cause the outer microscopes to form with it small angles of inclination, similar to those of the steel tongues of the compensation bars; the compensated point of each outer microscope is so adjusted as to be in the outer focus of its object-glass. It will be seen that the com-

pensated points of the outer microscopes are thus always six inches apart. The instrument, admitting of all the necessary movements, and of being put in position with the necessary degree of accuracy, is fixed to the end of the wooden box containing a set of the measuring bars. The dot or compensated point of the latter is brought into good focus of one of the outer microscopes, and the box containing the next set of measuring bars is then put into position, and its dot or compensated point brought into the focus of the other outer microscope. The distance between the two sets of bars is thus accurately bridged; so that the measurement may go on free from all the dangers of inaccuracy incident to the making of contacts between adjoining bars, or effecting superimpositions of their compensated points.

The work of effecting the compensation, and fixing the compensated points, as well in the microscopes as in the bars, was performed by Mr Drummond. The first difficulty which he encountered in this work arose from the rates of changing temperature in the brass and iron being unequal. The mode in which this difficulty was overcome, is described in a paper published by Captain Yolland, in his Account of the Measurement of the Lough Foyle Base, compiled from MSS. written by Mr Drummond. The method is as ingenious as the experiments for working it out were refined and delicate.*

"The mode adopted for equalising the rates of changing temperature in the two metals consisted in maintaining the surface of one of the bars, namely, that of the brass, constant, and varying the surface of the iron till the requisite effect was produced. For this purpose the brass bars were bronzed and

* Yolland's "Account," &c., p. 11.

varnished; the iron bars were browned like the barrels of fowling-pieces, lacquered, and then smoked; and the surface of lamp-black so produced was gradually removed during successive experiments till the requisite effect was obtained. This being done, the spaces covered with lamp-black were carefully marked, and the iron bars cleaned and revarnished, the same portions being again covered by the lamp-black mixed up with varnish. After this process they were again subjected to experiment, and if any alteration was required, it was made in the same manner. The difficulty consisted in producing the proper surface for the iron in the first set of bars, the variation of the others being determined with comparative facility.

"In conducting these experiments every precaution was taken to ensure satisfactory results. The place selected was an apartment in the Ordnance Map Office at the Tower under ground, surrounded by high walls, and remarkable for the uniformity of its temperature. On the stone floor of this room were placed stone piers to which microscopes were attached, and a wooden platform, supported on blocks at a distance from these piers, was laid down to prevent any derangement that might be occasioned by the observers incautiously stepping too near them.

"In order to heat the bars they were carried to an adjoining closet, and placed on two beams near the roof; ignited charcoal was then spread on the floor and underneath the bars; sheets of iron were placed about three feet above it, and a blanket spread under the bars; the object of the two latter precautions being to intercept the direct radiation, diffuse the current of heated air, and prevent the temperature of the bars from rising too rapidly. The closet having slowly attained its maximum temperature, maintained it very steadily for several hours, and by means of the occasional addition of small quantities of charcoal, a temperature of 120° or 130° might be kept up any length of time without varying more than two or three degrees. These precautions were taken with a view to induce equality of temperature in the bars on which the correctness of the compensation depended; and when thus heated the bars

were removed, placed with great care under the microscopes, and the variation in the length observed at given intervals."

The rates of changing temperature being equalised so that the fraction

$$\frac{\text{Increment or decrement of the brass}}{\text{Increment or decrement of the iron}} = \text{a constant},$$

a knowledge of the positions of the compensated points was obtained from the known dimensions of the bars and the experimentally ascertained value of this fraction. In the MSS. referred to, Mr Drummond gives a summary of the experiments made on each bar for regulating the rates of changing temperature, ascertaining the rates, and determining the compensated points. These experiments, nearly ninety in number, were made between January 18, 1827, and 24th April of the same year. The tables exhibiting the results give the lengths of the bars in their different states, viz., before being heated, when heated, and after cooling; the temperatures at which they were examined ranging over the scale from 40° to 200°. "The approximate position of the compensated point," says Mr Drummond, "was, in the first instance, calculated from the mean expansions of brass and iron; but, being found to differ from this determination, it became necessary to alter its distance from the pivots. There being no adjustment for this purpose, a slip of silver was attached to the tongue, and a series of dots marked upon it, so as to extend on either side beyond the true but unknown compensation point. These dots were within ·0527 inch of each other, and were brought under the microscope in quick succession by means of transverse screws; and when the position of the true compensated point was determined with respect to these dots, the plate

was removed, a silver pin inserted (in the tongue) at the requisite distance, and a dot marked upon it." The experiments made by Mr Drummond for effecting the compensations in the compensation-microscopes were of the same nature, and the general results arrived at are given in the paper compiled from the MSS. already referred to. The adjustment of the compensations in the microscopes was effected in June 1827.*

The details have been preserved of many of the experiments summarised in the paper just cited, as well as of many others in which Mr Drummond had been engaged in the course of the year 1826, and which were carried on partly in his chambers at Furnival's Inn, and partly at the Ordnance Map Office. The experiments of 1826 are very interesting, and are obviously preparatory for those of 1827, by which the measuring bars and their microscopes were finally made and adjusted. They were entirely conducted by Mr Drummond.† There were in all forty-one experiments on the heating and cooling of brass, steel, and iron rods; on the effect of the nature of the surface in heating and cooling bodies; and on the rates of heating and cooling of brass and iron solid cylinders. With these he was engaged during July, August, and September of 1826, the 28th of September being the date of the last; the date of the first is not recorded, but it was probably a day early in July. The range of temperatures was very considerable, freezing mixtures being employed in the cooling processes, and charcoal fires in the heating. Captain Yolland says, that when these experiments were made, but little was known on the subject. In his Account (Appendix No. III.) will be

* Yolland's "Account," p. 17.

† See Note by Captain Yolland, App. to his "Account," p. 1.

found the details of experiments conducted entirely by Mr Drummond in May 1827, on the two ten-feet iron standard bars belonging to the Survey. And in the same Appendix, No. IV., will be found the experiments conducted entirely by Mr Drummond in June and July 1827, for the comparison of two sets of the measuring bars about to be employed at Lough Foyle, with Troughton's five-feet brass scale floating on mercury, and of Troughton's scale with Shuckburgh's, and of these scales with themselves in different circumstances; also of the three-feet Shuckburgh with the parliamentary standard. The results of these fill tables occupying six pages quarto. Immediately before, and during, the measurement at Lough Foyle, Mr Drummond, assisted, for the first time, by Lieutenant Murphy, compared, by an extensive series of experiments, the whole of the measuring bars with one another and with the Ordnance standard. These comparisons were, after the completion of the work, continued at intervals by Drummond and Murphy down till the autumn of 1829. The compensation microscopes were, at or about the same times, tested and adjusted. The results of these tests and comparisons are exhibited in tables occupying about six pages quarto. Till the date of commencing the measurement Mr Drummond is represented by the authorative account as the sole experimenter on the measuring bars, which must, accordingly, be held to have been constructed by him. The bars were, no doubt, furnished in an approximate state of completeness by Troughton.

Thus far the history of the measuring bars is free from obscurity. Mr Drummond made them, whoever designed them. The origin of the invention, however, seemed for a time to be not a little uncertain. On the

one hand, Mr Drummond seems to have long been the reputed inventor. "For a long time," says Colonel Portlock, "Lieutenant Drummond was considered to be the inventor of the compensation bars."* And this early repute seemed to be confirmed by Sir John Herschel in his "Familiar Lectures on Scientific Subjects" (p. 187), published in 1866, in which the whole credit of the invention is ascribed to Mr Drummond. "The bars now actually used for base measurements," he says, "are miracles of ingenious contrivance and delicate workmanship. They are self-compensating for changes of temperature; that is to say, the two fine dots which mark the two extremities of the measure remain exactly at the same distance from each other whatever be the temperature of the bars, which are compound ones of two differently expansible metals combined on a principle devised by the late Lieutenant Drummond." On the other hand, Colonel Portlock, General Larcom, Captain Kater, and others, appeared claiming the invention for Colonel Colby. An investigation of the facts was thus called for; and it seemed to be the more necessary, from the only published statement in support of Colby's claim being in several respects unsatisfactory. But for the nature of this statement, it might have been sufficient to accept, without farther inquiry, the verdict on the question of authorship agreed upon by Portlock, Larcom, and others, who had opportunities of being personally acquainted with the facts.

To support Colby's claim to this invention is a main point of Portlock's memoir of his life. To give force to what he has to say on the subject, he drops the indirect style, and speaks in the first person—

* "Memoir of Colby," App. II. p. xvi.

"It is necessary that I should here speak in the first person, in order to convey graphically the first steps of Major Colby's invention. Every one who knew him in those days must remember how rapidly he moved or ran through the streets, rarely relapsing into a simple walk; and it was thus that I met him rapidly descending Tower Hill, when he took my arm, and, with the usual 'Come, my boy, I have something to talk to you about,' carried me with him to the Map Office in the Tower, which was not only the office for the business of the Survey, including the engraving of the maps, but also contained the private apartments allotted to Major Colby, as director of the work. When once there I was detained for the evening, and after dinner Major Colby fully explained to me the idea he had formed of a compensation measuring rod. [Here follows an elaborate account of the invention, not as a germ or conception, but as a thing fully and completely devised. The starting-point of the explanation is the gridiron pendulum, the principle of which is explained; and then follows Colby's plan:—'In the mode proposed by Major Colby, two bars of different metals were to be fastened together in the centre,' &c.] Having listened attentively to Major Colby's explanation of the principle of his proposed compensation measuring rods, I felt satisfied that it would succeed in practice; but such was not the opinion of all the members of our little senate, as Lieutenant Drummond was, in the first instance, more disposed to go on with his own inquiries, and expected a better result from them than from the proposed bars of our chief."*

He proceeds to state that he accompanied Major Colby to Mr Troughton, who at once approved of the plan, and made a small three feet model bar. "The small three feet model bar was rapidly made, and from that moment Drummond became the most able and active assistant of Major Colby in conducting all the preliminary experiments." Elsewhere he more clearly defines the function which he assigns to Drummond in connection with the bars. "The laborious experiments," he says, "which

* "Memoir of Colby," App. II. p. xi.

were made for comparing the standards with the recognised standards of measure, for determining the exact position of the compensated points of the measuring bars, and for examining various descriptions of varnishes in order to fix upon one which would equalise as much as possible, in the two metals, the times required for acquiring any change of temperature (a matter of the utmost importance, as upon that equality depends the perfection of the compensation action, whilst the rapidity of heating and cooling is very different in different bodies), were carried on by Lieutenant Drummond, assisted principally by Lieutenant Murphy, but occasionally by several of our little band, under the immediate eye of Major Colby, on the basement floor of the Ordnance Map Office. The result was everything that could be desired, and the base of the Irish Survey was measured under the immediate direction of the inventor of the bars in the summer of 1827 with the most perfect success, several portions of the measurement having been witnessed by some of the most eminent scientific men of the country." He takes no notice of Mr Drummond's experiments in 1826. As to the experiments from which Mr Drummond "expected a better result than from the proposed bars of our chief," we have the following account, introduced by the statement, that on the Irish Survey being resolved upon, Mr Drummond anxiously set himself to devising a new measuring apparatus.

"The quarters, in Furnival's Inn, of Lieutenant Drummond, became a laboratory and a workshop, and diligently did that highly gifted officer labour to produce a measuring apparatus which should be free from the alleged defects of those hitherto used. His last and favourite scheme was a riband, formed of slips of mica, and which it was supposed would be almost in-

variable in length, from its very low degree of dilatibility. As, however, this riband would have required to be supported, like the measuring rods of Svanberg, by a trussed plank, and to be kept straight by weights, it did not appear to ensure permanency of length, even had it been admitted as true that mica undergoes little perceptible extension by heat. During his trials, Lieutenant Drummond suspended the riband of mica by iron wires, but this system would not have answered in practice, as the expansion of the wires by heat would have affected their rigidity, and rendered different weights necessary for retaining them in one constant state of curvature. Encouraging his officers, as Major Colby always did, to pursue these inquiries, and taking the greatest interest in the results of their efforts, he did not himself remain idle; and though from his apparently careless manner they scarcely looked upon him as a rival, the master soon proved that in the race of invention he was able to beat the most ingenious of his 'boys,' as he familiarly called them."

Several of these statements appear to be incorrect. In Captain Yolland's account of the measurement of the Lough Foyle base, which was published under the direction of Colby, we have the work of each of those engaged in the operations for the measurement assigned to its performer on the evidence of official documents. The invention of the bars is indirectly ascribed to Colby, by a reference in the preface to the reasons by which he was induced to devise a new measuring apparatus. The earliest recorded experiments, however, are those of Drummond in his chambers at Furnival's Inn and the Map Office in 1826, in regard to the rates of heating and cooling of bars of brass, steel, and iron, and the effects, on these rates, of varying the surfaces of the bars. Neither Colby, Murphy, nor any one "of our little band," has any place assigned to him in connection with these experiments or those for equalising the rates of changing temperature in the bars, for ascertaining the

compensated points, or for putting the bars or microscopes in shape for use. They are assigned purely and simply to Drummond. As to the actual measurement of the base: "It was measured," says Portlock, "in the summer of 1827, under the immediate direction of the inventor of the bars with the most perfect success." He means Colby; but the base was mainly measured under the direction of Drummond. Portlock is incorrect even as to the time when the measurement was made. The measurement was not made "in the summer of 1827." Late in the autumn of that year measurements and remeasurements amounting to 13,250 feet were made; but the measurement was mainly made in 1828, in the summer and autumn of which year the measurements and remeasurements amounted to 30,533 feet.* And in 1828, when the work was mainly executed, Colonel Colby (who was present, and in charge of the operation, in the season of 1827) is officially noticed only as having been once on the ground during the whole operations, extending from July 7 to November 18.

"It should be stated," says Captain Yolland,† "that the charge of conducting the measurement was principally entrusted to Captain Drummond, who superintended the final examination of the bisection of the compensation points on the bars by the compensation microscope." He was, in short, "the officer in charge," whose numerous duties, before examining the bisection of the points, Captain Yolland fully details. Lieutenant Murphy had charge of the alignment. In a note, Captain Yolland says, "I am indebted for the greater portion of the information, both as regards the adjustments of the apparatus, and the detail of the

* Yolland's "Account," p. 29. † "Account," p. 30.

system followed, to Colonel Colby and Captain Henderson, inasmuch as there is little, besides the actual observations, among the notes and memoranda left in the office by Captain Drummond and Lieutenant Murphy, to enable any person who had not witnessed the operation to become sufficiently conversant with the apparatus to describe it, and the mode of proceeding. *Both* these officers, I believe [the doubt can apply only to Murphy], were fully acquainted with it, and perfectly masters of the subject; and it is much to be regretted that they were called on to undertake other duties before they had left written, if not printed, accounts of the operations between 1826 and 1834." Portlock also finds matter for regret in connection with the base measurement. "It is to be regretted," *he* says, "that Major Colby could not have devoted his time immediately to the publication of the details of this beautiful operation, and have thus connected his own name *alone* with a work so eminently his own."

This unsatisfactory statement seemed to be further discredited by a letter written by Sir John Herschel to Mr Drummond's mother, May 12, 1840, from which, also, it appeared that Herschel had been at one time uncertain as to the authorship of the bars:—"I am unable decidedly to say, and will not therefore incur the hazard of doing injustice to the talented and estimable officer at the head of that operation, by deciding whether the beautiful and simple idea, by which was performed the compensation for temperature in the rods employed in measuring the base in the plains near Londonderry, originated with himself or with Mr Drummond. It proved as successful in practice as it was perfect in theory, and, in its effects, went to abolish altogether one of the most precarious and annoying corrections in that

most delicate and difficult geodetical operation. To whichever be due the credit of originating this invention, the details of the contrivance and the execution of the project devolved on the latter, who, in accordance with what seems to have been a constant principle in his conduct, to leave nothing undone to ensure success, not content with entrusting, as many would have done, the adjustment of the compensation to an instrument-maker, himself executed, in the midst of furnaces, ovens, and freezing mixtures, all the trials, manipulations, and measurements necessary to ensure success.

"An anecdote may be mentioned here, which sets in a strong light this leading principle of hearty devotion to his object and its duties, to the exclusion not only of personal ease, but to the utter abnegation of all that egotistical feeling which induces so many to turn aside from suggestions of another with indifference, if not with aversion. While engaged in these operations the conversation between himself and a scientific friend happened to turn on the discovery of Mitscheelich, who had shown that in certain crystallised substances heat occasions expansion in some directions, and contraction in others, necessarily implying invariability in some intermediate directions. It was suggested, as a bare possibility, that such a condition might be satisfied by cutting mica in some certain direction to be ascertained by trial, in which case an inexpansive or naturally compensated measure would be obtained. Nevertheless, some time afterwards, the writer of these lines, happening to visit him in his apartments at the Tower, found him surrounded by strips of mica, and busied in working out the suggestion. The result, however, proved abortive in everything but the illustration of character it afforded."

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It seemed at variance with the character here ascribed to Drummond by one who knew him well, that he alone "of our little band" should have been indisposed to entertain the principle of compensation from giving the preference to an idea of his own. It appeared also that Portlock misunderstood the object of the mica experiments, which was to procure a naturally self-compensated measure; and further, that these experiments, instead of having preceded those for constructing the compensation bars, were entered upon and abandoned in 1827, when the bars were in the course of being constructed. The basis of Portlock's case for Colby seemed to be thus seriously impugned. In this state of the facts it was felt that the merit of the invention should not be surrendered to Colby, except on evidence of a much more precise and satisfactory character being adduced.

Such evidence was after a time furnished by General Larcom. It appears that the bills of Troughton and Simms have been preserved in the Ordnance Survey Office, and show that the mica experiments belong to the spring and summer of 1826, and are of earlier date than any of the recorded experiments on the expansions and contractions of brass and iron bars and cylinders. It also appears that Mr Browning, who assisted Mr Drummond in the year 1826, is distinct in his recollection that the mica experiments were carried on in Furnival's Inn.* Larcom and Dawson are also clear in their recollections to the same effect, as will be

* The following entries occur in the bills of Troughton and Simms:—

"23 Mar. 1826. Apparatus for straining wire in mica experiments, £2.

"1 June 1826. Brass mountings, adjustments, &c., applied to apparatus employed in mica experiments, £1, 10s."

seen from the subjoined extracts from a memorandum written by General Larcom :—

" My conviction with regard to the relative shares of Colby and Drummond in the design and execution of those instruments is that to Colby belongs the design, to Drummond the execution. Colby having himself used the previously existing English apparatus, and being familiar with the various instruments which had been used in the measurement of bases elsewhere, considered a new apparatus necessary. He resolved to adopt the compensation principle, and devised the form. He first satisfied himself the principle was sound, and tested the mechanical difficulties, which, he found, were all surmountable. He then devolved on Drummond the duty of superintending the construction, which Drummond, with the invaluable assistance of Troughton, successfully accomplished.

" The grounds on which I rest this statement of the relative shares of Colby and Drummond in the base apparatus are, personal knowledge and daily intercourse with all the parties concerned, having been myself one of the officers at the Tower at the time, and taking part in the early operations in the cold cellar and heated chamber, having been more than once at Troughton's with Colby, and often with Drummond in the evenings at Furnival's, where I also lived. No one at that time thought of Drummond as the inventor of the bars. He never claimed to be the inventor, and, I believe, would have been the first to repudiate the idea.

" But that does not derogate from his merit. He made the bars, was the deviser and planner of the numerous and beautiful contrivances and experiments by which they were brought to perfection, and with his own hand executed most of the experiments. . . . I find among my letters from Colonel Dawson, in October 1840, when I was writing my own brief memoir of Drummond, the following paragraph :—' Drummond's indefatigable exertions in the construction of the bars, and in the measurement of the base in Ireland, you are yourself aware of. The principle on which the compensation depends was suggested by Colonel Colby, and the means by which it should be supplied ; but great credit is still due to

Drummond for the ingenuity displayed by him in mastering many difficulties which were met with during the construction of the apparatus, and for the laborious experiments by which its perfection was at last established. Previous to the construction of the bars, Drummond had entertained the idea of using bands of talc for the purpose, and had made some experiments, which you may remember, at Furnival's Inn; and subsequently, on observing that the thermometers, when laid on the bars, do not immediately take and represent the actual temperature of the bars themselves, he suggested the use of thermometers instead of bars, to be made of a length suitable for the purpose. This idea, however, was, as you know, never worked out.'"

The evidence of Larcom and Dawson, who had personal knowledge of the whole matter, must be accepted as conclusive. It is supported by the bills of Troughton and Simms, and by proof of the authorship of the bars having been claimed for Colby from the first. Captain Yolland, it now appears, had never heard of his claim being disputed. In 1828, in the "Philosophical Transactions," Captain Kater thus asserted Colby's right to the invention:—"The measurement of a base has hitherto not kept pace with the progress of other geodetical operations; but the elegant arrangement which Lieutenant-Colonel Colby has recently imagined, for compensating expansions, and which already has been tried in Ireland with perfect success, leaves no doubt of the future accuracy of this most important part of trigonometrical operations." It is satisfactory, moreover, that there is a witness—than whom there could be no better—that Mr Drummond never claimed the merit of the invention himself. In this state of the facts the conclusion to be arrived at seems to be that the design was Colby's, and the execution Drummond's; that to the former belongs the general conception, and to the latter the realisation.

It should be remembered, however, that the execution of the design in this case involved something more than mechanical contrivance and delicacy of experiment. It required much ingenuity and inventiveness. The device for equalising in the two metals, by the use of varnishes, the times required for acquiring any change of temperature—without which there could be no compensation action—belongs to Drummond, as well as the contrivance of the silver plate, by means of which the position of the compensated points was exactly determined.

It is due to Sir John Herschel to say, that immediately on Colonel Portlock's statement being brought under his notice, he expressed himself satisfied that the merit of the invention belonged to Colonel Colby. He wrote: "I do not remember ever to have had any conversation with Drummond on the subject of *how* or *with whom* the invention originated. It was certainly from him, and not from Colonel Colby, that *I* first learned the principle of their construction; and, having no knowledge of any such bars having been constructed as those on whose adjustment and trial I knew him to be engaged, I took it for granted it was a contrivance of his own, and have always since spoken of them as 'Drummond's compensation bars.' . . . So far as I see, Colonel Portlock's statement is perfectly plain and direct, and is not incompatible with any fact within my knowledge. In writing the passage at page 185 of my Lectures, I wrote in the belief and full impression of its correctness, never having heard it stated that Colby was the inventor. The book has now been in print for several months, so that it is too late to correct or in any way to modify that passage, which, were it otherwise, from what I now know, I should certainly do."

The details of this investigation might perhaps, with propriety, have been decently buried out of sight, and the result merely laid before the reader. It seems, however, not undesirable that, the matter having been fairly sifted and settled, there should be a record of the evidence on which their respective shares in the work fall to be assigned to Colby and Drummond. And such a record is, perhaps, the more desirable, that in reliance on the passage in "The Familiar Lectures" the whole merit of the compensation bars has been recently, in a work of reference, assigned to Mr Drummond."*

We come now to the devices employed for testing the accuracy of the measurement as it went along.

It would be out of place in a work which it is hoped may have interest for the general reader, to enter into the particulars of the contrivances for securing the levelness and straightness of the base-line. Everything that ingenuity could devise was done to attain these ends. A novel feature in the measurement, however, and one which falls to be noticed, was the employment of triangulation for the verification and extension of the base. This was a device of Drummond's to prevent the possibility of the measurement of a single bar or microscope being omitted in the daily record, as well as to ascertain the probable error which might be involved by adding a portion to the base on its own prolongation by triangulation. Remeasurements were also made whenever there was reason to apprehend that there had been any accidental derangement of the apparatus. Sir John Herschel and Mr Babbage were at one of these remeasurements, when the coincidence of the two measurements was so close as to be surprising

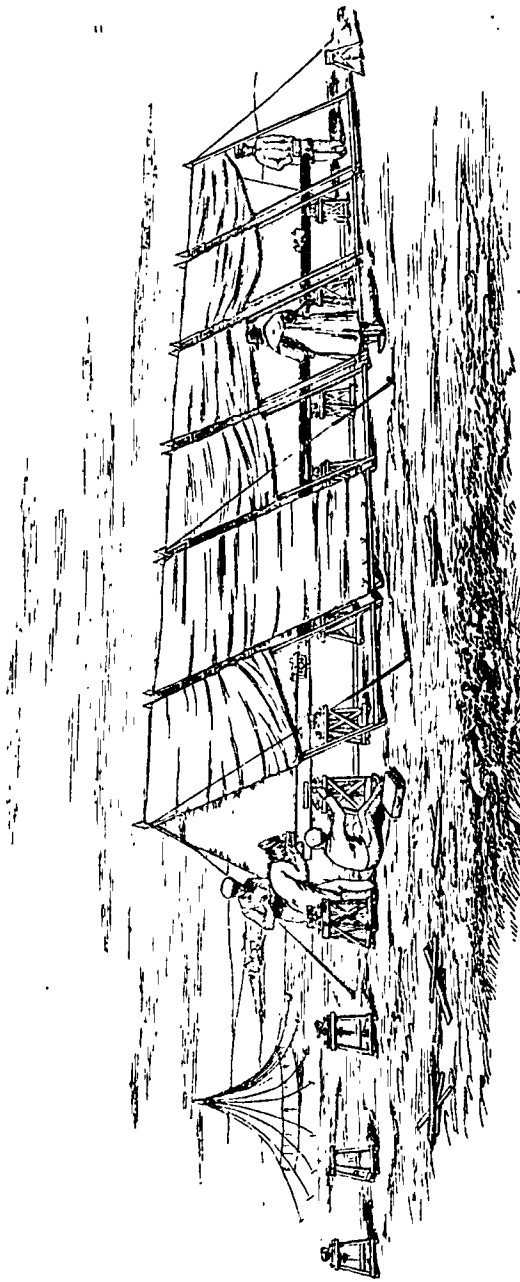
* "Chambers' Encyclopædia," Art. TRIANGULATION.

even to men accustomed to deal with the smallest quantities measurable by the micrometer.* An admirable pencil sketch (copied in the annexed woodcut), taken by Sir John on the spot, and now in his possession, shows the process of measurement, the six bars in position under their protecting tents, and the officer in charge engaged in observing the compensation microscope. It is the sketch alluded to in the following letter—the only account of the measurement, written by Drummond, that has been preserved, and which has been put into my hands by Sir John Herschel, to whom it was addressed :—

"MANCHESTER, *Nov.* 25, 1833.

"MY DEAR SIR,—In consequence of the wandering life I am at present leading, and of some mistake at a country post-office, your lettter of the 28th ult. reached me only a few days ago. Not having a single paper or document of any kind to refer to, I must answer your questions about the Irish base-line rather from the impression which some previous inquiry has left upon my mind, than from any very distinct recollection of the circumstances which have produced it. The distance is about 7⅛th miles, and the error I believe not to exceed 2 inches. I shall endeavour, to the best of my recollection, to state to you some of the grounds of my belief. The line is intersected by the river Roe, not deep, except for a few yards, but having a width of 480 feet. We looked forward to the crossing of this river with some degree of apprehension; it was necessary to drive piles the whole way across to support the bars, an operation of some difficulty and expense; and although every precaution was resorted to in order to render them steady, it was not sufficient to prevent the tremulous motion produced by the current. It was therefore considered indispensable that this portion should be measured twice. On the first occasion

* It appears from the official account that this visit was paid on the 13th September 1827, a few days after the measurement commenced.



SKETCH SHOWING THE MODE OF PROCEEDING IN MEASURING THE LOUGH FOYLE BASE.

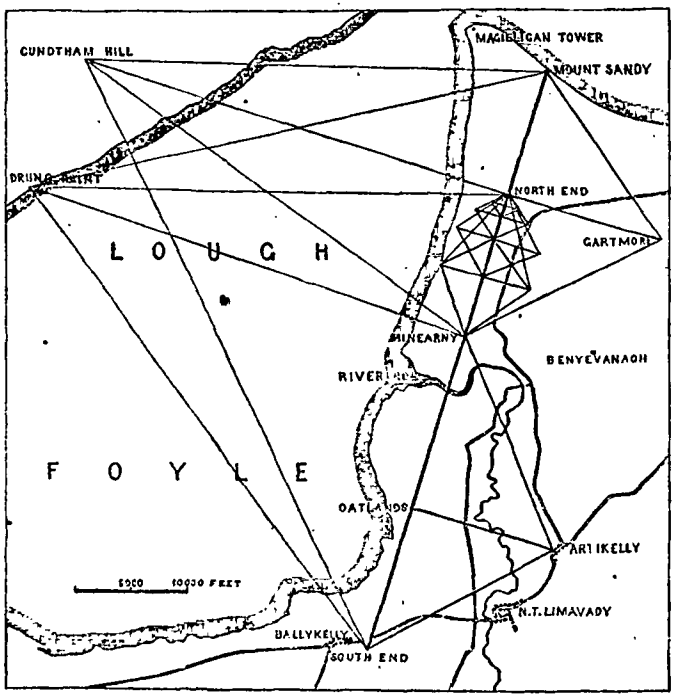
(The Original by Sir J. F. W. Herschel, Bart.)

we commenced at low water, having the advantage of shallow water, but the disadvantage of a stronger current; on the second we began at high water, in order to vary the circumstances as much as possible. The difference was $\frac{1}{3}\frac{1}{2}$ inch between the two measurements. Now this was beyond comparison the most difficult and troublsome part of the whole line. Again, at the commencement of the operation., before we had become expert at the use of the apparatus, when we proceeded very slowly, it was thought desirable to remeasure the first three or four hundred feet. You may recollect that you and Babbage arrived at the very moment when we were concluding this experiment, and that there was scarcely any perceptible difference between the terminating dots. In this case the ground was firm and good. This was indeed its general characteristic; but there were certainly portions boggy and elastic, which gave us considerable trouble. In passing over these, we of course resorted to every precaution we could devise to ensure accuracy; all the intersections were made at once, and several times repeated; and weights were placed so as to preserve each terminating point of a series under similar circumstances, whether it formed the first or last of a series. No portion of this ground was, however, twice measured. In addition to these repetitions and precautions, points were preserved with great care at different parts of the line, in order to furnish the means of trying one portion against another, by means of a triangulation; and the results of many trials furnish perhaps the most satisfactory proofs of the accuracy of the measurement.

"The series of triangles [exhibited in the woodcut annexed, copied from Yolland's "Account"] is spread like net-work on both sides of the base; and the difference of ·1, ·2, and very rarely ·3 of a foot, on large distances, are pretty good proofs that our errors cannot be great. From some rough calculations made at the time, I came to the conclusion already stated. I meant to have gone through these more accurately, though there are many circumstances which it is difficult to submit to calculation. Other occupations have intervened for a time, but I have not abandoned my intention, and shall communicate to

you the result. This, I think, is all the information I can give in answer to your first question.

"With respect to your second question, as to the base on Hounslow, the measurement by General Mudge is the test of its accuracy; and I must refer you to the account of the survey rather than venture to make any statement from memory. The difference was, however, very small. Indeed, it is somewhat mortifying to find that, with an apparatus as superior to



the wooden rods of Boscovich and Bonquer, as a microscope micrometer is to a pair of carpenter's compasses, we have not attained to much greater accuracy than they themselves claim. If they are right in their estimation, or correct in their statements, our labours have been in vain.

"The extremities of the base at Hounslow were marked with guns (very useful for such purposes), and, during the radical riots several years ago, orders having been issued to remove all

the guns on martello towers, in the batteries, or wherever they were to be found, the indiscriminating dogs laid hands on the sacred pedestals, and conveyed them to an ordnance store! I believe, however, that beneath the guns oaken piles were driven, and these it would not be difficult to find. The marks on Hanger Hill Tower and Shooter's Hill Tower are preserved. With respect to the extremities of the Irish base, the most satisfactory precautions have been taken to secure them. The bases, about 3 feet under the surface, consist of four slabs, about 3 inches thick, and 7 feet long by 3½ broad. These are laid transversely, while longitudinally two blocks of compact sandstone, weighing about (I think) 17 or 18 cwt., and being somewhere about 4 feet square, are placed above them—the whole firmly cemented with Roman cement. The surface is level with the surface of the ground, and the soil is very firm and secure. They were placed several weeks before they were used, to get rid of any little settlement to which they might be liable. The ground has, however, been purchased, and enclosed by the Ordnance.

"There is little to attract attention, and there is sufficient strength to resist any ordinary attempts of the country people to remove them, supposing them to be so inclined, which I believe they are not. Nothing but the mandate of Captain Rock or Dan O'Connell would expose them to destruction. I am ashamed at having detained the sketch so long. It is safe, however, and shall be sent to you as soon as I return.

"I have now endeavoured to answer your questions, very imperfectly I admit, but as well as my present situation and occupations will admit of my doing. If you require anything more, I shall be most happy to procure it on my return to town, which will probably be in a fortnight. At present I am engaged making some inquiries for Government, which occupy my whole time; but I assure you that you do me a favour by affording me any opportunity of showing, though in a very humble way, the grateful sense I entertain of your kindness on many occasions.—Believe me, my dear sir, most truly yours,

"T. DRUMMOND."

The actual measurement of the Lough Foyle base commenced on the 6th September 1827, and was continued without intermission till the 25th of October, when, in consequence of the advanced state of the season, it was deemed advisable to suspend the work till the following year. The measurement was resumed on the 7th July 1828, and continued till the 25th of the same month, when it was suspended, in consequence of the crops being on the ground over which the line lay. It was resumed after the harvest, on the 13th of September 1828, and completed on the 20th November of the same year.

CHAPTER IX.

THE ORDNANCE SURVEY; MR DRUMMOND'S HEALTH; THE DRUMMOND LIGHT AND LIGHTHOUSES; A VISIT TO THE KING; LORD BROUGHAM.

AFTER the measurement of the Lough Foyle base, Mr Drummond remained for some time in Ireland, the head-quarters of the Survey being now in Dublin. In December 1828, and January 1829, he was engaged, along with Lieutenant Murphy, in comparing the measuring bars and the standards, and testing the compensation microscopes; which work they resumed and completed in the following autumn. During a portion of the summer, they were occupied in observations for the triangulation in the vicinity of the base.*

The anxiety and exposure attending the operations in 1828 had seriously affected his health—the second, if not the third time, that a severe illness had sprung out of his devotion to the service. He suffered much, as in the winter of 1825, from palpitation and sleepless-

* The observations made at Minearney by Messrs Drummond and Murphy in June 1829 are given in the Appendix to Yolland's "Account," where will also be found the results of the comparisons referred to, pp. 20, 21, and 22. In February, March, and April 1830, Mr Drummond was engaged in a similar set of comparisons.—*Ibid.* pp. 15, 19. The last time he took part in experiments of this kind was in the spring of 1833, when, along with the Rev. R. Sheepshanks and Mr Simms, he was engaged in ascertaining the expansions of the Royal Society's brass scale.—*Ibid.* p. 12.

ness. He refers to this illness in a paper read before the Royal Society, June 17, 1830, "On the Illumination of Lighthouses." The Trinity House Corporation had resolved, as early as 1826, to give his light a trial as soon as the apparatus should give a steady continuance of light, and be fit to be entrusted to ordinary attendants. "The survey of Ireland, however," he says, "had just been commenced; and being employed on that service, I found it impossible to continue my experiments, in the first instance, from constant occupation and absence from London, and latterly, from a long and severe illness, the consequence of a very laborious and anxious duty in Ireland. During the last winter, however, I was again able to return to the subject." The reference is to the measurement of the base, in the course of which he had suffered much from inclement weather, and from frequently standing in deep water (as in crossing the river), intent on the measurements, and regardless of himself.

This, as I have said, was the second, if not the third illness suffered in the service. Miss Drummond speaks of a severe illness, the date of which I am unable to fix. He occupied, she says, a hill-station in Ireland. The weather became tempestuous, and the station untenable; yet he held to his post at first from a sense of duty, but afterwards from inabilty to leave it. A chance visitor to the station, who happened to be a medical man, discovering his condition, hastened for assistance to the house of a landed proprietor in the neighbourhood. He described the camp hut as filled with water, and Drummond as certain to die if allowed to remain in it. The gentleman appealed to at once made for the hill, accompanied by his son. They found Drummond very ill, and had to carry him to the carriage,

where they rolled him in blankets which they had provided. Having taken him home, they nursed him with the greatest care and kindness, for the six weeks which passed before he was able to return to his mother's house. Miss Drummond's recollection is, that the name of these hospitable people was Mac Causland. She adds, "He was about a fortnight with us before he was able to go out just a little. I remember the Survey people wanted to stop his pay. He wrote them a thundering letter. 'Was there ever anything equal to this?' he said; 'they throw away thousands of pounds, and would rob me when I am become disabled in their service.'" He heard no more of the threat to "suspend payments." It seems impossible that this account can refer to the illness which followed the sojourn on Slieve Snaght. Larcom thinks the time must have been the close of the first season at the Base.

He arrived in London late in the autumn of 1829, to prosecute his design of fitting the lime-light for light-house use. He had been engaged in improving the apparatus for this purpose in the spring of 1826, and may then have got it nearly into shape; he was certainly ready to bring it into use very soon after his return to town. Before the end of the year he was busy with experiments instituted by order of the Trinity House, for ascertaining the relative merits of the different methods of illumination in lighthouses. Some of these were carried on at the Trinity House; others at a small lighthouse at Purfleet, which had been placed at his disposal by the Corporation. They were conducted under the direction of the Committee for the Management of the Lighthouses, and they fairly established the superiority, at least in brilliancy, of the Drummond Light over all others.

The original light apparatus had been designed for the Survey. Portability, rather than economy, had been studied in its construction. The ball of lime—from which when intensely ignited the light was derived—was heated by means of a stream of oxygen directed through a flame of spirit of wine. This source of heat was expensive, and, in considering the changes now to be made, economy was a primary object. For the alcohol Drummond substituted hydrogen gas, which proved not only much more economical, but productive of a considerable increase of brilliancy in the light.

The new apparatus was exceedingly ingenious. The oxygen and hydrogen gases, proceeding from separate gasometers, arrive at a small chamber, where they are made to mix. Into this chamber the oxygen gas is projected horizontally through a series of very small apertures, the hydrogen gas rising into it vertically through a series of similar apertures. From this the united gases pass through two or three pieces of wire gauze, and, being thoroughly mixed, issue through two jets against the lime ball in the focus of the reflector. To prevent the wasting of the ball opposite the two jets, and at the same time to diffuse the heat more equally, the ball is made by the apparatus to revolve once in a minute. Notwithstanding this movement, the heat cuts a deep grove in the ball, and it becomes necessary to replace it by a new one every three-quarters of an hour. As it would be unsafe in a lighthouse to intrust the replacing of the ball to an attendant, the apparatus is so contrived that it effects the replacement itself. The number of balls required to maintain the light for any time are placed on a wire passing through the focus of the reflector; the ball in the focus drops the moment it is sufficiently worn, and its place

is instantly taken by another—the next above it on the wire—which two minutes before has fallen into a position to be gradually heated for doing duty in the focus.*

From a letter dated January 16, 1830, written to his sister, it appears that the Duke of Clarence, who a few months later became King William IV., had been expected to witness the experiments in his character of Master of the Trinity Corporation; and that an experiment which had been made with the lime-light, before the apparatus had been brought into perfect working order, had resulted in an explosion. Miss Drummond had cautioned her brother not to enter upon the experiments till he had completed his preparations.

"LONDON, *January* 16, 1830.

"MY DEAR ELIZA,—A week, more than a week, has passed since I ought, and since I intended, to have answered your kind, kind letter; but every day and every evening has brought such constant occupation that I positively have not had time.

"The consequence, no doubt, has been many conjectures, and much exercise to my dear mother, if the bell rang about post-time. Now, what have been your conjectures? Another explosion, perhaps, and the heir-presumptive, along with all my beautiful apparatus, sent to the upper, or perhaps the under regions; or everything gone off well, and the Duke extremely

* This description is an abridgment from Mr Drummond's paper in the "Philosophical Transactions." There is an alternative contrivance for maintaining the constancy of the light in certain cases. "Wherever the light is required to be diffused equally around, the renewal of the lime may be effected still more easily, by using a cylinder instead of a ball, which being gradually raised while revolving, brings fresh portions in succession opposite the jets. In a reflector a cylinder occasions partial shadows at the top and bottom; still, however, the simplicity and certainty with which it may be renewed, will probably entitle it to a preference even in this case." —*Phil. Trans.* 1830, p. 388.

delighted, expressed himself highly gratified, and intended conferring upon me some signal mark of his royal approbation! Well, to keep you in suspense no longer. The Duke was not present; he was unwell, and unable to leave his house. We were all prepared, for the messenger did not arrive till the last moment. The next Board day, when he is expected, is the 5th February. Meanwhile we proceed with the experiments, and it is with them that I have been so much engaged this week. But this is Saturday evening, an evening of repose and enjoyment, and I have taken advantage of it to discharge my debt to you. I was grieved to hear of more colds and plaisters, and I fear much that this fierce weather does not agree with you. . . . Do you ride? How is the pony? Has John recovered, and has he been laying down the law? I think you might manage among you to write a little oftener. There are some long gaps in our correspondence, and some long intervals during which I hear nothing of you. . . . Almost all my acquaintances have been ill more or less. I have great reason to be thankful that I have kept so well; indeed, notwithstanding all my work, I am in rude health, sleep but one sleep, and no palpitation. All the advice you gave me in your letter I acknowledge to be excellent, yet the exhibition was unavoidable, and so was the explosion. But I think they have got over it; if not, I will tell them the first time I have an opportunity of making a speech, that if I had been making an experiment before men unacquainted with the peculiar nature of such experiments, I should have declined proceeding under such circumstances; but before enlightened and intelligent men, whose indulgence and partiality I had more than once experienced, I could have no hesitation in trying even a first experiment, deeming it the best compliment I could pay them to show them the apparatus under the most disadvantageous circumstances. . . . My best and kindest love to you all at home. Adieu, my dearest Eliza, and believe me your ever affectionate brother, T. DRUMMOND."

The Duke of Clarence was present, and highly gratified, when the lights were exhibited at the Trinity House on the 5th of March; after the exhibition he

presided at a dinner of the Corporation, to which Drummond went as a guest. By the month of May 1830 the scene of the experiments was transferred to the lighthouse at Purfleet. The light was making a sensation again, many of the most distinguished men in London going to witness its brilliant effects. Though Drummond did not oppose the experiments for testing the efficacy of the light at a distance, as that might have been impolitic, his view of them, expressed to his mother, was, that they were "mere trifling, and waste of time." They were spreading his reputation, however, and every day bringing him new friends. By this time, six of his lights had been ordered by the East India Company, at the cost of L.100 a-piece. He was astonished at, but rather regretted, the Company's liberality, considering the hands into which the lights would fall. "I am busy," he says, "preparing an account of our operations in Ireland, to be delivered as a lecture on Friday at the Royal Institution."* Friday was also to see the last of the experiments on the lights. "I will then present a report to the Trinity House, and they will decide what further steps should be taken. I am writing a paper on the experiments for the Royal Society."†

This paper has been already referred to. It opens with a rapid history of methods of illuminating lighthouses, and account of those in use in the best lighthouses of Great Britain and France; a description, accompanied by illustrative plates, of the new apparatus

* Letter to Mrs Drummond, 9th May 1830.

† Drummond was elected a Fellow of the Royal Astronomical Society, May 14, 1830. He was proposed in March of the same year. In a letter belonging to that month, he says, "I am doing all I can to render myself an efficient member of the Astronomical."

for exhibiting the Drummond light is next given, and is followed by a summary of the results of the Trinity House and Purfleet experiments.

The first set of the experiments were on the illuminating powers of the different lights, independently of the lenses or reflectors with which they are generally used. In these the method of shadows, and that of equally illuminated surfaces, both dependent on the same principle, but requiring different instruments, were employed. The standard used was an Argand lamp, $\frac{7}{8}$ inch in diameter, supplied with the finest spermaceti oil, and capable of supporting a flame $1\frac{3}{4}$ inch in height. It was found that the light emitted by the French lamp, a large Argand, with four concentric wicks, was equal to ten standards; while that emitted by a lime-ball only $\frac{3}{8}$ of an inch in diameter, heated by two jets, was equal to thirteen standards. The next set of experiments respected the intensity or intrinsic brightness of the lights, the property on which their utility in lighthouses more immediately depends. The French lamp was found to be four times, while the lime-light was 264 times as intense as the standard! "These results," says Mr Drummond, "were obtained by screening the lights, and then placing equal apertures opposite each, changing the apertures, and taking the mean to destroy the effect of any inaccuracy in size. The intensity of the lime-ball being, therefore, 264 times that of the Argand lamp, a single reflector, illuminated by the former, will be equal to 264 reflectors illuminated by the latter; but the divergence of the reflected light, depending on the size of the luminous body in the focus, will be smaller with the ball than with the lamp, in the proportion of about 3 to 8; hence, in such a lighthouse as that of Beachy Head, 8 reflectors may be

substituted for 30, and yet an effect would be produced 26 times greater than that of the present light, the most perfect of its kind in this country."

By similar experiments, it was found that the French lens, a compound one, built up of separate pieces, on a principle first suggested by Sir David Brewster, was equal to 10·4 reflectors, taking into account the effect of the additional lenses and reflectors that ought to accompany it; and that the effect of a single reflector with a lime-ball would be equal to 25 times that of the French lens, accompanied by those additional lenses and reflectors.

"Such appear to be the singular and important results," says Mr Drummond, "of our late experiments at the Trinity House. Made with every precaution by different individuals with different instruments, and unbiassed by the knowledge of each other's results, I see no reason to doubt their accuracy; and the comparative appearances of the different lights, when exhibited at a distance of ten miles, though not admitting of being reduced to numbers, confirm the striking superiority of this method of illumination."

The comparative appearances of the lights, as seen at a distance, are described in a letter, addressed to Mr Drummond by Captain Basil Hall. The lights were exhibited from the temporary lighthouse erected at Purfleet, and were observed from the Trinity Wharf, Blackwall, at a distance in a straight line of 10¼ miles. Drummond being engaged at Purfleet, could not himself judge of the effect. But among the observers were Sir George Cockburn and Mr Barrow from the Admiralty, accompanied by several naval officers of high standing; the Lord-Advocate of Scotland, Sir Thomas Brisbane, Colonel Colby, Captain Beaufort, hydrogra-

pher to the Admiralty, and several others eminent for their professional and scientific attainments. Captain Hall assured Mr Drummond that he had endeavoured "to frame his account of what passed in strict conformity with the general sentiments of the party, and neither to exaggerate nor underrate any of the results."

"4 St James' Place, *June* 1, 1830.

"My Dear Sir,—You wished me to take particular notice of last night's experiments with the different kinds of lights exhibited at Purfleet, and observed at the Trinity Wharf, Blackwall; but I have little to add to what I told you respecting those on the evening of the 25th instant; indeed, it is not within the compass of language to describe accurately the details of such experiments, for it is by ocular evidence alone that their merits can be understood.

"Essentially, the experiments of last evening were the same as those of the 25th, and their effects likewise. The degrees of darkness in the evenings, however, were so different, that some particular results were not the same. The moon last night being nine or ten days older, lighted up the clouds so much, that even when the moon herself was hid, there was light enough to overpower any shed upon the spot where we stood by your distant illumination; whereas, on the 25th, when the night was much darker, the light cast from the temporary lighthouse at Purfleet, in which your apparatus was fixed, was so great, that a distinct shadow was thrown upon the wall by any object interposed. Not the slightest trace of any such shadow, however, could be perceived when your light was extinguished, and any of the other lights were exposed in its place.

"In like manner, on the evening of the 25th, it was remarked by all the party at the Trinity Wharf, that, in whatever direction your light was turned, an immense coma or tail of rays, similar to that produced by a beam of sun-light in a dusty room, but extending several miles in length, was seen to stream off from the spot where we knew the light to be placed,

although, owing to the reflector being turned too much on one side, the light itself was not visible.

"Now, last night there was none of this singular appearance visible; but whether this was caused by the presence of the moonlight, or by the absence of the haze and drizzling rain which fell during the evening of the 25th, I cannot say. I had hoped that the appearance alluded to was to prove a constant accompaniment to your light, in which case it might, perhaps, have been turned to account for the purposes of lighthouses. If in hazy or foggy weather this curious effect of reflected light from the atmosphere be constant, it may help to point out the position of lighthouses, even when the distance of the observer is so great that the curvature of the earth shall render it impossible for him to see the light itself.

"The following experiments, tried last night, were the same as those of the 25th, and certainly no comparative trials could be more fairly arranged:—

"Exp. I. The first light exposed was the single Argand burner, with a reflector. This was quite distinctly seen, and all the party admitted it be a good light. After several minutes, this was put out.

"Exp. II. The seven Argand burners were next shown, each in its reflector; and this was manifestly superior to the first; but how much so I cannot say—perhaps four times as conspicuous. Both these lights had an obvious tinge of brown or orange.

"Exp. III. The third light which was exposed (on the seven Argands being put out), was that behind the French lens; and I think it was generally admitted by the party present that this light was whiter and more intense than that from the seven Argands, though the size appeared very much the same.

"Exp. IV. The fourth light was that which you have devised, and which, instead of the clumsy word 'lime,' ought to bear the name of its discoverer. The Drummond light, then, the instant it was uncovered, elicited a sort of shout of admiration from the whole party, as being something much more brilliant than we had looked for. The light was not only more

vivid and conspicuous, but was peculiarly remarkable from its exquisite whiteness. Indeed, there seems no great presumption in comparing its splendour to that of the sun; for I am not sure that the eye would be able to look at a disc of such light, if its diameter were made to subtend half a degree.

"The next series of experiments was the most interesting and decisive of all. Each of the lights above enumerated, viz., the single Argand burner, the seven Argands, and the French lens, were exposed, one at a time, in company with your light, in order to try their relative brilliancy.

"*First comparative Experiment.*—The single Argand burner was first exposed to this comparative ordeal, and nothing could be more pitiable than the figure it cut. Many of the party could not see the Argand light at all; while others could just detect it 'away in a corner,' as some one described it. It was also of a dusky orange tinge, while your light was of the most intense whiteness.*

"*Second comparative Experiment.*—The seven Argand burners were now substituted in place of the single light. All the party could now see both lights, but the superiority was not much less obvious. I really cannot affix a proportion either as to size or brilliancy; but I should not hesitate to say that your light was at least six or eight times as conspicuous; while in brilliancy, or purity, or intensity of light (for I know not precisely what word to use to describe the extreme whiteness), the superiority was even more remarkable. All this which I have been describing was expressed, and appeared to be quite as strongly felt, by the rest of the company, to the number, I should suppose, of five-and-twenty or thirty persons, who were all closely on the watch.

"*Third comparative Experiment.*—The next comparative trial was between the French lens and your light. The superiority here was equally undeniable, though the difference in the degree of whiteness was not so remarkable. The French

* "To many the rays from the brighter light appeared, when seen with the naked eye, to extend across and envelope the fainter light, though the perpendicular distance between them was twenty-five yards."

light, however, is so nearly similar to that from the seven Argands, that the comparison of each of them with your light gave nearly the same results, and all equally satisfactory on the score of your discovery. . . . .

"*Final Experiment.*—The flashes with which the experiments concluded were very striking, and might, I think, be turned to great account in rendering lighthouses distinct from one another. The revolutions were not effective, and, as I said before, there was no appearance last night of those enormous comets' tails which swept the horizon on the night of the 25th, to the wonder of all who beheld them: neither could there be detected the slightest trace of any shadow from the light thrown towards us; and I suspect none will ever be seen, when the moon, whether the night be clouded or not, is of so great a magnitude.

"Such is the best account I can give of what we witnessed; and I need only add, that there seemed to be amongst the company but one opinion of the immense superiority of your light over all the others brought into comparison with it.—I am, &c. BASIL HALL."

The superior brilliancy of the light being thus established, the only point for farther inquiry was the expense of its production. The result of Mr Drummond's inquiries on this point are set forth in his paper, and are unfavourable to his light. "It may, however, in this, as in every similar instance," he observes, "be expected that, after a little experience, a considerable reduction in the cost would be effected."

"This is a new source of artificial light, differing from every other at present in use, and the materials by which it is produced are among the most abundant products of nature; but never having yet been applied on a great scale to any practical purpose, it has not hitherto been an object to obtain them in a separate state at a small expense. . . . Meanwhile, however, the case in question may perhaps be regarded as one where expense ought not to be a primary object of consideration. On all ordinary occasions, the preference of one mode of illumi-

nation to another is a question of convenience, luxury, or economy; but in this it assumes a more important character, for it involves to a great extent the preservation of life and property. . . . . The advantage of the light being fully recognised, attention may now be exclusively directed to remove some of those minor obstacles that might render its use in lighthouses objectionable; and I have great pleasure in adding, that the Trinity Corporation are desirous that every facility in their power should be afforded with a view to effect this object, and that a series of preliminary experiments is accordingly to be carried on at their expense."

It was but for a short time that Mr Drummond was free to prosecute such inquiries. He was engaged in them up to the spring of 1831. In a letter to his mother, dated February 22, 1831, he writes: "Truly this same light gives no small trouble. . . . In the last paper which I sent to the Commissioners, I stated that the French light equals, if it does not surpass, the best of the lights in our lighthouses in splendour, while it is superior to them in economy and facility of management: This Stevenson either denies, or has hitherto been negligent in ascertaining. . . . The experiments at Inchkeith have been ordered by the Commissioners [of the Northern Lights], with a view to judge of the point themselves, and not trust to Stevenson's opinion. It is a question between the present method and the French light, not between mine and either. Their relative values have been ascertained by the Trinity House and Blackwall experiments, in a way which admits of no doubt. To recommence similar experiments would be mere trifling. There are obstacles in my way of a different kind, relating to the manufacture of the gas, management, &c., *which I am now endeavouring to remove.* With respect to brilliancy there can be no doubt." By the middle

of the year, however, his political employment commenced; and though he never lost sight of the subject, he was never able again to recur to it. "This abstraction of Mr Drummond's attention," says General Larcom, "at the moment when he was nearest to success, must, so far as the light is concerned, be considered matter of regret: with its projector it has dropped; but if it be practicable, ingenuity will, doubtless, sooner or later, be directed to render it available, and the Drummond light may yet cheer the home-bound mariner from the Great Skellig or the Tuskar."*

* For some time the Drummond light has gone out of public notice. The interest and the expectations it excited at one time may be gathered from a question put to Mr Drummond when under examination as a witness before the Select Committee on Lighthouses in April 1834. "The Committee would like very much to have it on their minutes what circumstances gave rise to this very great and important discovery, which is likely to be of such infinite use to the world at large?" In an article in the "Edinburgh Review" for April 1835, reviewing the Report of this Committee, a suggestion of Sir David Brewster's that the Drummond light should be employed as a separate instrument in every lighthouse for occasional use, is considered and adopted. The occasional light was proposed to be used only in hazy weather, when other lights are either altogether obscured, or lose their characteristic appearances. "The general system of illumination by oil or gas lamps and lenses *is adequate, in* ORDINARY WEATHER, *to every want oft he navigator;* and nothing could be more irrational than to introduce the lime-ball light into lighthouses as a general mode of illumination—unless it could be done as *cheaply*, as *safely*, and as *effectually* as the present improved system with oil or gas lights. . . . The lime-ball light holds out to us an admirable resource in seasons of occasional danger; but we cannot approve of the idea of making an unnecessary glare upon our coasts, with the inseparable accompaniments of unnecessary expense and unnecessary danger." The inadequacy of the ordinary lights for other than ordinary weather, *i.e.*, for all occasions when their aid is *most* wanted, is here confessed. On the other hand, that greater expense and danger are inseparable from the use of the Drummond light is assumed, but is

And here a break may be made in this monotony of scientific detail, by quoting an amusing letter, written by Mr Drummond to his mother, describing his visit to the king for the purpose of presenting to him a copy of the paper, read before the Royal Society, on the Trinity House experiments. The letter, which sets Drummond in a new light, tells its own story so fully that no words of introduction to it are necessary, unless, indeed, it may be proper to prefix the postscript: "It takes a long time to tell a story on paper. If I had anticipated such a 'long yarn,' I am afraid I should not have attempted it. But I hope it will amuse you, and that was my object."

"LONDON, *January* 24, 1831.

"MY DEAR MOTHER,—I have begun with a sheet as large as your own, but whether I shall fill it as well is another question. The business part of your letter shall be first answered, and the remainder of the sheet devoted to amuse you. . . . . Now, as you sent me a description of the lecture [most probably a lecture delivered in Edinburgh on the Drummond light], I mean to send you a description of another scene which may not gratify you so much, but which, I hope, will nevertheless interest you. Believe me, my dear mother, the chief, perhaps the only

by no means certain. Had Mr Drummond been free for a little longer to follow up the subject, it is not improbable that his ingenuity would have enabled him to overcome these objections, and that ere now his light would have superseded every other for lighthouse purposes. The following recommendation of the Committee on Lighthouses seems not to have been attended to. They say—"Captain Drummond stated to the Committee all the objections to the present use of his light in lighthouses; but your Committee are so strongly impressed with its importance, and with the merits and ability of Captain Drummond, that they recommend that means should be adopted without delay for prosecuting still farther the experiments recommended by him, and under his direction if possible; or, if he cannot superintend them, then under some fit person."

pleasure which I received from the account of the lecture arose from your being there to hear it; and if with you I mourn the absence of those, from sickness or from death, who would have participated in your feelings, still I am gratified that among those who did witness it my dearest mother was one. Now, to return to my promised description—for one forgets there are limits to a sheet of paper. Among others to whom it was considered proper that a copy of my paper should be presented was a certain illustrious personage called the King. Now, at the mention of this word away goes your imagination long before my description, and you conclude at once that I am on the high-road to honour, rewards, emoluments, and so forth. Not so, however. Yet have I had honour to a certain extent—as much as could with propriety be bestowed, and more than was expected. Well, then, the reason for presenting the paper to the King was, that his Majesty is still Master of the Trinity House, and had, as *Duke of Clarence*, been present at many of the experiments. It was necessary to obtain the King's permission to present the book in question, which he was graciously pleased to give to the Deputy-Master, Captain Woolmore, his old friend. Next came the question, how it was to be presented. I had intended sending a copy in its blue cover to Mr Woolmore for this purpose, but I was given to understand that that would not be according to etiquette; and it was finally resolved that the little pamphlet should be made into a little book, bound in morocco, and stamped with the royal arms, and furthermore, that I should accompany Captain Woolmore to Brighton, when he went to present the monthly report of the Trinity House to the King as Master. This being settled, another difficulty arose about uniform. Our uniform has been lately changed; it was considered improper not to go in uniform, and, alas! no alternative remained but that I should get the necessary paraphernalia without delay—Robe [a brother officer who at the time lived with Drummond] being like 'two single gentlemen rolled into one,' his garments are of no use to any one but the owner. With great exertion I got everything ready, and by Monday evening, the 9th inst., I found myself at Brighton, where, according to

arrangement, I met old Woolmore, who had come from another quarter the same evening. At ten the next morning we walked over to the Palace, and put our names in the book of audience. One of the pages carried them to the King, who was still in the breakfast-room, and returned almost immediately, saying that the King desired we should have our breakfast, and that his Majesty would see us afterwards. As we had breakfasted previously, we declined the royal hospitality; but if we had not, we should then have been conducted to the room where the equerries breakfast, and where all strangers and visitors, coming, as we did, of the class of gentlemen and noblemen, are received. We were then conducted into the ante-room of the King's private room, and shortly afterwards he passed through, and we followed him into his room. He seated himself at a writing-table, Woolmore and I standing at the opposite side. I then presented my book, and accompanied it with some explanation. I had, indeed, prepared a little speech for the occasion, but somehow or other I could not get it in. Nevertheless, I contrived to express the gratification which it afforded us to have had the honour of exhibiting some of the experiments before his Majesty, and to have witnessed the interest which he was pleased to take in them; and furthermore, I told him of the continuation of the experiments afterwards from the lighthouse at Purfleet, knowing full well that he would never look at the book, notwithstanding the above-mentioned interest, and I mentioned the remarkable fact of a shadow being cast at the distance of ten miles. Whereupon his Majesty was pleased to exclaim, 'God bless my soul; *that's very wonderful!*' Some further conversation ensued, and then he asked what I intended doing when I returned. I replied, that having fulfilled the object of my visit to Brighton in being permitted the honour of presenting the paper to his Majesty, I had purposed returning to London that day. 'Are you particularly obliged to be in London to-day?' 'No, sir, only the usual routine of duty.' 'Then you will dine here to-day.' I bowed low. 'Woolmore will show you the way. We dine at seven.' I bowed and withdrew, leaving old Woolmore to finish his business. In the ante-room, to

which I returned, there were several gentlemen waiting, to more than one of whom I heard the unpalatable information given 'The King, sir, cannot see you to-day.' While waiting for Woolmore, one of the pages came and offered to conduct me round the Pavilion—a singular mixture of grandeur and simplicity. One room, spacious and lofty, contained gorgeous furniture, and splendid paintings; but the paintings represented nothing, I should apprehend, ever seen in this planet. Birds, beasts, and fishes glittered in gold, but were very unlike the beasts of the field or the fowls of the air, such as we are accustomed to see them. Passing from this room—the music-room—which realises the description of the Arabian Nights, we entered a room of a character altogether different—low in the ceiling, neat, but simple, the furniture simple, and having a pretty cheerful appearance, though very different from that of its more gorgeous neighbour. From this we passed into a small music-room, similar to the first in shape, but equally simple in its character with the last; and thence into the drawing-room, commonly used when there is no party; and finally into the dining-room, another magnificent but fantastical room. Preparations were making in the different rooms for the ordinary occupations of the day. In one a portrait of the King, now executing by Sir William Beechy, was brought out. As we were entering one of the rooms, one of the pages whispered to my conductor that the Queen had just entered it, whereupon *we* did not enter. Old Woolmore meanwhile rejoined me, pleased with our interview, and gratified at the King having invited me to dinner. He dines on such occasions at the Palace as a matter of course, from his long previous intimacy with the King; but I fancy it is rather an unusual honour to confer on a subaltern. Well, we amused ourselves for the rest of the day walking about the town, calling on some people whom we knew, or rather whom Captain Woolmore knew; and, partly from what I was told, and partly from what I overheard, it was obvious what a matter of mighty moment it was to be received, and well received, at the Pavilion. A. had been invited when B. thought he ought to have been invited. Though the Duchess C. had left her name,

no notice had been taken of her call; and so on. The world is the same everywhere, varying only in the scale. Most of these people are of large fortune, and of a station in society to secure them every comfort and happiness; but they are fashion's slaves, and miserable. So passed the day. The Earl of Errol had offered to send his carriage for us, which Captain Woolmore accepted; and having entreated me to be ready in time—though, to tell the truth, there was no great necessity for the caution, seeing I had no wish to have to walk into a room where King, Queen, and Countesses were at dinner, without knowing very well where to go to. However, I can go no further to-night—past twelve—candles smouldering in their sockets, and breakfast to-morrow morning at half-past eight—Good night. Now, to return to the dinner party. My old friend went to his room to dress at half-past five o'clock, and at six o'clock his servant came to me to know if I was ready. He could not overcome his anxiety lest I should not be prepared at the moment, supposing, perhaps, that as one may always take a quarter of an hour at ordinary dinner parties, I might inadvertently, and from habit, do the same on this occasion. However, I relieved all his apprehensions by entering his room, fully equipped or harnessed, at half-past six o'clock. The hour for the carriage, a quarter to seven—no carriage. Ten minutes to seven—no carriage. What shall we do? Wait three minutes more, and then walk, was my proposal. Enter the waiter—'Lord Errol's carriage is at the door, sir.' Doors fly open—waiters clear the way; enter the carriage, and next moment we are at the Pavilion, a splendid hall, and two rows of servants in the royal livery. We are conducted by a page to a long gallery or room. I have drawn a plan, to make the description more intelligible. In the long room was a single lady. Old Woolmore made his bow, and introduced me to the Countess of Mayo. She is the lady waiting on the Queen. Speedily ladies and gentlemen began to enter the room, almost all of them resident in the palace, for it so happened that there were not above four or five strangers at dinner that day. It might be reckoned almost a family party in point of numbers, though the number amounted

to thirty. Presently the Queen enters (by the door marked in plan), leaning on the arm of her maid of honour, a very pretty girl by the bye. Ladies and gentlemen form into two rows on each side, to allow Her Majesty to pass to the drawing-room. Then the King enters, bows to such of the gentlemen as happen to be near his side, and walks on to the drawing-room. Then the gentlemen enter the drawing-room, or walk about the gallery till dinner is announced. Whether the King conducts the Queen or not I cannot tell you, being too distant to notice that part of the ceremony. Be that, however, as it may, the King takes his seat at the middle of the table, ladies of the highest rank on his right and left. On this day the Landgravine of Hesse Homburg, Princess Elizabeth, and Lady Maryborough, were, I believe, the ladies. The Queen on the opposite side, Prince Leopold on her right, Lord Mayo on her left. At the two ends were two officers of the household, Sir Andrew Barnard and Sir Philip Watson. Where to go—where to place oneself, was the difficulty. There were more gentlemen than ladies, therefore it did not fall to my lot to conduct any of them into the dining-room. Old Woolmore had the last. However, my embarrassment was very soon over, and I found myself very comfortably seated between two ladies—very pretty women; but who might they be—Mrs or Misses, Countesses or Duchesses? From this difficulty I was speedily relieved, by a gentleman on the left of one of these ladies introducing me to both of them. One of them, Miss Mitchell, a beauty, and maid of honour to the Queen; the other, Lady Errol, one of the Fitzclarences (daughter of the King and the late celebrated Mrs Jordan). To the gentleman I had been introduced before dinner by Woolmore, but I had not heard his name. I found out afterwards, however, that it was Sir Augustus D'Esté, the son of the Duke of Sussex and Lady Augustus Murray. I was still more indebted to him on our return to the drawing-room. D'Esté is a colonel in the army, and well acquainted with some of our principal officers; and he kept all around him at table in good humour. He was kind, attentive, and polite to all within his reach. Lady Errol was pleasant and conversible, so that I speedily found

myself, if not absolutely at home, yet unconstrained and unembarrassed.

"The King sets an example to the household in his attention to his guests. He asks them all to drink wine with him, from the highest to the lowest. Indeed, he asked me twice—the second time probably because he had forgotten the first. The dishes are brought round by servants, the dessert only being on the table, with magnificent gold candelabra and vases, &c.; the tablecloth is therefore not removed. Plates, silver; servants, of course, in great numbers, and exceedingly attentive. The Queen and the ladies rise, and leave the room; and after no great interval, the King rises, and is followed by the gentlemen, if they please, to the drawing-room. After the departure of the ladies, Sir Augustus D'Esté and I had a long chat; and after the King had withdrawn to the drawing-room, I was obliged to remind him that, as the scene was new to me, I was anxious to see what was going on in the drawing-room. 'I had almost forgotten,' he replied; 'but come, and I'll introduce you to some of the ladies.' Well, we entered the drawing-room, where ladies and gentlemen were dispersed much in the way they are in any other room. The ladies—many of them at work, but the conversation was in a low tone, no voice being heard except the King's. In the music-room there was obviously less restraint. The Queen's band occupied the room, and played at intervals. At one table sat the Queen, Lady Mayo, Miss D'Esté, Marchioness Wellesley, and some other lady. They were all employed in embroidering. On the opposite side sat the King and Lady Maryborough on a sofa; and the remainder of the ladies and gentlemen were disposed in groups, in different parts of the room; but it seemed, on entering the music-room, as if they laid aside a mantle of ceremony, and talked and chatted with less reserve. This cannot be a happy state of things, however, though very well to look at *once*. Well, the music ceases; presently the Queen rises. The ladies form in two lines at the door, and the Queen kisses the cheek of each of her own ladies of honour. They in return kiss her hand. She then disappears. The King follows, and then—the devil take the hindmost."

By this time Drummond and his friend Robe had established themselves in a house in Park Road, with a general servant, Margaret, a most excellent woman, and a page, to attend upon them. In the letter just quoted there is a reference to Robe's mother—Lady Robe—and to two of the Miss Robes, as visiting the friends, seeing to the putting up of their curtains, and to other domestic arrangements. The page was Margaret's antithesis. "We are now very comfortable," says Drummond, "saving having a young flibberty-gibbet of a boy, who must be one of the devil's imps, I think, except that he speaks the truth, be it for or against him, and, indeed, it is very rarely in his favour." In another letter, he says he has to cuff the imp occasionally on the ears—a cuff being the only argument he will listen to. The Park Road establishment was not long continued. Robe's mother died suddenly in February 1831, when it was proper that he should be more with his sisters, and the house which he shared with Drummond became no longer needful to him.

A near neighbour in Park Road was Mr Bellenden Ker, with whom Mr Drummond became acquainted. Mr Ker was a Chancery barrister, who also enjoyed a considerable literary reputation. Than one of his works, "The Archæology of English Rhymes and Phrases," I know no book, in its way, more curious and ingenious. At his house Drummond made the acquaintance of many distinguished people, and notably of Miss Hariett Martineau and Lord Brougham.

There is an account of his first meeting with Lord Brougham, an event which was powerfully to affect his career, in a letter to his mother, dated March 26, 1831. "By the way," he says, ".I dined with the Lord Chancellor the other day, not at his own house, but at the

house of an intimate friend of his, a Mr Ker, a Chancery barrister, to whom I was introduced some time ago, and with whom I have become very intimate. Mrs Ker is a pleasant woman, and their society is very agreeable. Well, the Lord Chancellor, it appears, had expressed a desire to see the brilliant light which he had heard of; and Mr Ker told him he dared say that I would show it him with pleasure. Accordingly, the Chancellor fixed a day to dine with him, and I put up the apparatus in Mr Ker's greenhouse, the lamp being directed to the drawing-room. There were only eight persons present, all intimate friends of Brougham's; so that the conversation, at and after dinner, about men and things, more especially the Reform question, was most entertaining and interesting. The Chancellor was in great spirits, and talked the whole time. After returning to the drawing-room, I displayed the light, at which they expressed great admiration, though the Chancellor seemed greatly afraid of his eye, and could hardly be persuaded to look at it. I spied him, however, peeping at a corner, and immediately turned the reflector full upon him, but he fled *instanter*. He started immediately afterwards, at eleven o'clock, for Lord Grey's."

There is much sprightliness exhibited in the letters of this season. Everything was going smoothly with Mr Drummond, and with success there was an accession of geniality and joyousness. In one of his letters there is an amusing essay on the use, abuse, and manufacture of porridge, accompanied with diagrams of course, as if it were to be laid before the Royal Society. There is a frequency of fun. His fortunes, health, and spirits were alike excellent.

From the meeting with Lord Brougham may be dated the end of his scientific career. It did not

actually end then, but his intervals of study were few from this till the time of his final absorption in politics. Lieutenant Drummond, Fellow of the Royal Astronomical Society, reputed inventor of the measuring bars, and fresh from Ireland after accomplishing one of the most delicate and interesting geodetical operations ever performed—now astonishing the town with his brilliant light, as he had years before astonished the savans—was a man of mark, to be everywhere received and courted. In manners very modest and gentle, he created none of those jealousies which often prove obstacles to the success of men of parts. And while few, if any, made him the subject of detraction, the many who knew him well, and loved him, spread his credit for general accomplishments as remarkable as the particular achievements on which rested his public reputation. An upright, able, and indefatigable public servant, his character as a private gentleman was wholly unblemished. Such was Thomas Drummond, and such was his reputation, when, in the thirty-third year of his age, he began to make the acquaintance of political personages, and stood on the threshold of political life.

CHAPTER X.

THE BOUNDARY COMMISSION; THE MATHEMATICS OF REPRESENTATION.

In April 1831, the Government of Lord Grey, having been defeated in committee on the first Reform Bill, offered their resignations to the King, but he would not accept them. A dissolution of Parliament followed, and then a general election. In June, the second Reform Bill was introduced in the new House of Commons. The House went into committee upon it on the 12th of July, the committee reported on the 7th September, and on the 21st the Bill was carried triumphantly through the Commons. It was debated in the House of Lords early in October, and thrown out by an unexpectedly large majority. Late in the same month Parliament was prorogued, that it might reassemble, and go over the whole matter again. On the 6th of December it was again in session, and on the 12th Lord John Russell moved for leave to bring in the third Reform Bill. This bill, as every one knows, after undergoing some slight modifications, became law on the 7th June 1832. It differed in some particulars from its predecessors; it differed from them, more especially, in being founded on pretty full information.

The principle of the bill, as announced by Lord Grey, was Representation not Nomination, the dis-

franchisement of decayed and inconsiderable boroughs, and the enfranchisement of large and opulent towns. The extreme reformers, who desired an extension of the franchise downwards, as well as upwards and laterally, and who were far from being satisfied with the new electoral qualification proposed by the bill, were yet falling in with the Whigs, on purpose to secure the great end of the bill—the overthrow of borough corruption. Many boroughs were to be deprived of the right of sending members to Parliament, or rather many noble lords were to be deprived of the right of sending their nominees. Many boroughs were to be partially disfranchised, many to be enfranchised, and of many the boundaries were to be enlarged. These had been features of the former bills. But when the first bill was before Parliament, no preparations had been made for determining the boundaries of the parliamentary districts that were to be retained or created. The House of Commons had been for some weeks in committee upon the second bill, before the Government faced the necessity of preparing for the settlement of the boundaries. And both of these bills had proposed to determine, by consideration of the element of population alone, which of the boroughs should be totally disfranchised (put in Schedule A), and which partially (put in Schedule B). In the third bill, on the other hand, the selection of the victims was proposed to be made on somewhat complex considerations, the element of population being only indirectly regarded. Also, when the third bill was introduced, the preparations for the Boundary Bill were far advanced, though the Government were in the dark, even then, as to the boroughs to be placed in Schedules A and B.* The preparations

* See Speech of Lord John Russell, February 20, 1832.

for settling the boundaries were the work of the Boundary Commission, of which Mr Drummond was the head. The selection of the victims for Schedules A and B was the special work of Mr Drummond.

In August 1831, Lord Melbourne, then at the head of the Home Office, addressed Mr Drummond as follows:—

"HOME OFFICE, *August* 8, 1831.

"SIR,—His Majesty's Government being desirous to obtain and collect as much information as possible, and as speedily as may be consistent with accuracy, upon the different cities and boroughs included in Schedules (B), (C), and (D) of the Reform Bill, and also upon the other cities and boroughs not included in any of the Schedules, but which are to retain the right of sending members to Parliament, in order that when the bill shall be passed into a law, the commissioners to be appointed under it may have the means of performing their duties with the greater expedition,—I am to acquaint you that his Majesty's Government have seen fit to confide to you the superintendence of this inquiry.

"For the purpose of carrying the intentions of his Majesty's Government into effect, you will immediately communicate with the gentlemen named in the margin, and furnish them with copies of this letter.

"The points to which your attention is to be directed are these—To obtain information as to the number of persons occupying, whether as tenants or owners, houses of L.10 a-year value, such value to be taken either from the tax returns or parish rates, or from actual valuation where not let, or from amount of rent.

"It will not be necessary to be very minute in ascertaining these numbers, as all that will be wanting is, to ascertain whether or not any place has as many as 300 such inhabitants. If it has not, then inquiry must be made as to the neighbouring district most fit to be added thereto, in order to increase the number of such inhabitants as aforesaid.

"In making such addition, the district or districts taken in must be either parishes, townships, chapelries, or other divisions

of known legal denomination; and no part of any such division less than the whole is to be taken in.

"When the city or borough has 300 such inhabitants, as aforesaid, or more, then the inquiry will relate to the proper boundary to be assigned for such city or borough. In fixing such boundary it will be proper, as far as possible, to take the known limits of parishes; wards, townships, or chapelries, or other divisions of known denomination. But if any such division or divisions, in which any city or borough 'having an ample constituency' is situated, extends considerably beyond the portion covered or nearly covered with houses, the boundaries must be assigned as nearly as possible, comprising the city or borough, and little or no portion of the country. In assigning these boundaries, regard must be had as far as possible to fixed objects not likely to be removed, as points of land, lines of trees, bridges, milestones, or roads running from given points.

"The same rules are applicable to assigning the boundaries of cities and places which contain less than 300 inhabitants of L.10 houses, and the districts to be added in order to increase the number of such inhabitants.

"For the purpose of carrying these instructions into effect, you will form the gentlemen hereinbefore named into six boards of two each, and assign to them the places which they are to visit. If necessary, you will repair to the spot where they are carrying on their inquiries. You will collect and preserve their reports, and the documents or other matters accompanying the same, and you will confer and correspond with them from time to time, and give them such suggestions and information as they may desire, and as you may judge useful.

"If you find a greater number of boards necessary after the first week of this operation, you will report the same to me.—I have the honour to remain, sir, your very faithful and obedient servant, MELBOURNE."

It is understood that Mr Drummond had been recommended to the Government for this employment by his

friend, as he had by this time become, Lord Chancellor Brougham. After the dinner at Mr Ker's, Drummond frequently met, and he improved his acquaintance with the Chancellor at the council meetings of the Society for the Diffusion of Useful Knowledge, of which he was a member. Mr Ker is said to have suggested the appointment; if so, he was almost singular among Drummond's friends in desiring that he should enter public life; by most of them Drummond was urged to decline the proposal of the Government, lest he should be diverted from the pursuit of science. He had no hesitation himself in undertaking the task. The cause of Reform was one in which he was eager to be useful; and to be put at the head of this Commission, at his age, was a high distinction. The commissioners, "the gentlemen named in the margin," were all men of ability. Among them were Mr E. J. Littleton, M.P., who, after being Chief Secretary of State for Ireland, became Lord Hatherton; Captain Beaumont, R.N., Hydrographer to the Admiralty; Messrs Bellenden Ker, Romilly, Drinkwater, and Sheepshanks, all eminent either in science or in law and literature. Drummond accepted the appointment, and entered at once upon the arduous duties of the Commission.

The next ten months were among the busiest and most exciting of his life. His first task was to prepare instructions for the guidance of the commissioners. These he was able to issue by the 23d of August. Then followed numerous further preliminary arrangements. On the 3d September 1831 he wrote to his mother, telling her briefly of his appointment. "I am driven from post to pillar," he says, "and so occupied with the preliminary arrangements I have barely time to sleep or eat." On the 9th September he went more

into detail. The inquiry was being performed by eighteen commissioners (the number was afterwards increased to twenty-four), with about thirty surveyors and draftsmen, expending about L.80 per day.

"For the money I am of course responsible. I have to examine and criticise the daily reports [of the commissioners], and supply all their wants in the way of plans and documents. The situation is highly honourable and confidential, and I have been treated with great attention by the Lord Chancellor, by Lord Althorp, and by Lord John Russell, with whom I have had, and now have, frequent communications and interviews. I give them my full service in return; am at the office, which is about three miles distant [he was living at Park Road] by ten o'clock; never move till the post leaves at seven, and have seldom got home to dinner till near eight, after which I am not very able for much more exertion; yet sometimes I have documents to prepare for next day. I cannot enter further into detail, for I am tired, and it is near one, and the morning brings another long day's work. . . . I hope the Government will be satisfied. Dawson was sent for on my recommendation, and is of the greatest service to me. He takes the whole charge of the surveyors off my hands, and makes admirable arrangments in the country. . . . Not a word, if you please, of this inquiry, or of my superintending it."

A first report of this Commission was ready, and ordered to be printed, on the 20th January. The final report was sent in on the 10th February 1832, on the 16th of which month the Boundaries Bill was introduced in the House of Commons. It was June, however, before the commissioners were fairly off duty, as the calls for further evidence on questions regarding the boundaries were constantly occurring. The reports and relative returns, accompanied by elaborately-drawn maps, indicating the proposed divisions of counties and boundaries of boroughs, as parliamentary districts,

form a large folio blue-book.* The instructions framed by Mr Drummond for the guidance of the Commissioners and surveyors are printed with the reports. They are at once an illustration of his powers of organisation, and a proof of the wisdom of the Government in appointing him to superintend the Commission.

While this work was in progress, another and more delicate task was confided to Mr Drummond, as will appear from the following letter addressed to him by Lord Melbourne:—

"WHITEHALL, *24th Nov.* 1831.

"SIR,—The Government having determined to found the Reform Bill on a new basis, I request your assistance to enable them to ascertain the relative importance of the smaller boroughs in England and Wales.

"It is proposed to take the number of houses and the amount of assessed taxes for the year ending April 1831 together as the test of disfranchisement. The inquiries of which you have had the direction, and the information obtained in answer to circular letters sent from this office, will put you in possession of the data from which such a calculation can be made.

"You will have the goodness, therefore, to make a scale, containing, in addition to ninety-seven boroughs (the number comprised in Schedules (A) and (B) of the former Bill), the ten or fifteen immediately above them in size and importance. You will arrange these boroughs in such a manner that the lowest may be the first, and the highest the last on the list. I shall be obliged to you to send me, at the same time, an account of the manner in which the calculation has been made.—I have the honour to be, &c., MELBOURNE."

"Lieut. Drummond, R.E., &c. &c."

* "XI. Part I. Parliamentary Representation. Further return to an address to his Majesty dated 12th December 1831:—For copies of instructions given by the Secretary of State for the Home Department, with reference to Parliamentary Representation; likewise copies of letters and reports received by the Secretary of State for the Home Department in answer to such instructions."

Drummond sent in a first report in execution of this commission on the 12th of December 1831, and the final report on the 16th of January following. The report was accompanied by a list of the boroughs arranged in the order of their relative importance, by the evidence, and a statement of the principle on which that order depended.*

The "new basis for the Reform Bill" was far from being distinctly set forth in the instructions which he had received. Let us see what he made of it. The *basis* was that the number of houses and the amount of assessed taxes should be the test of disfranchisement. Presumably, it was intended, in estimating the relative importance of a borough, to allow *weights* to the houses which it contained, and to the assessed taxes which it paid, *proportional* to their respective *numbers*, and such that the whole weight of all the houses should be equal to the whole weight of all the taxes in the mass of boroughs considered. On this, as the unexpressed meaning of his instructions, Drummond proceeded. "The method adopted for carrying this principle into effect," he says, "may be stated in the following words:—

"1*st*, Take the average number of houses contained in the boroughs to be arranged; divide the number of houses in each borough by this average number, and a series of numbers will be obtained denoting the relative importance of the different boroughs with respect to houses.

"2*d*, Take the average amount of the assessed taxes paid by the same boroughs, and proceed in the same manner as described with respect to the houses; a series of numbers will re-

* The Report is a considerable blue-book, "Returns relative to the 120 smallest Boroughs at present returning Members to Parliament. 1832."

sult, showing the relative importance of the different boroughs with respect to assessed taxes.

"3*d*, Add together the numbers in these two lists which relate to the same boroughs, and a series of numbers will be produced denoting *the relative importance* of the different boroughs with respect to *houses* and *assessed taxes* combined."

This account of the method of computation was contained in the first report to Lord Melbourne, dated 12th December 1831. It was made known in the House of Commons early in January, when the method was immediately called in question and ridiculed by Mr Croker. He declared it "absurd and complicated in the extreme." The principle, judging from the examples in the printed paper, was "altogether absurd and inapplicable." He, moreover, expressed his conviction, from the dilatory manner in which information was being supplied to Parliament, that "there was some party desirous of preventing the complete investigation of the facts." These must have been painful observations to be listened to by Mr Drummond. But more annoyance was to come. The principle was thereafter repeatedly canvassed inside the House and out of it. The rumour had gone abroad that parliamentary representation was now to be based on scientific principles, and a new class of combatants entered the arena of political strife. Algebraists arrayed themselves with the opposing factions, and for a time "the Drummond list" became the subject of numerous speeches, pamphlets, and newspaper articles. The first impressions of the public seem to have been against the calculations, and even some of the newspapers usually in the interest of the Government assailed them. When everything connected with the Reform Bill was being made the subject of hot controversy, it was natural

that this list, which marked out the boroughs to be disfranchised, should be vigorously attacked. Much of the controversy to which it gave rise may, indeed, be referred to the keenness with which the boroughs selected to be victims were struggling for existence. How great this was we may see in the reason for "the new basis" of the Bill. The two former bills had taken as the test of disfranchisement a certain amount of population, and put in Schedule A all those which did not reach that amount. The amount of population had been judged of according to the census of 1821. But by the date of the third bill the census of 1831 had been taken, and could not be thrown out of view. And the ostensible and declared reason of "the new basis" was that pains had been taken to raise particular boroughs above the line of disfranchisement by importing into them inhabitants against the time of the census. When such practices could be employed to preserve the franchise, those interested in the returns would, in their discomfiture, spare no pains to discredit the principle on which they were now being, anew, selected for disfranchisement. On the other hand, by the new test some boroughs, originally in Schedule A, got out of it, and some, originally not in it, took their places. The latter might be expected to be foremost in clamouring against the principle which led to such a result.

Among those who had any title to be heard on the mathemetical question, the chief controversy respected Drummond's third step, whether the numbers in the first two series of figures should be *added*, as in his plan, to obtain those of the third and final series; or *multiplied*, as some maintained; or multiplied, and the square root of the product taken, as was argued by others. It caused Drummond much annoyance and

pain, inexperienced as he was in party politics, to find the principle thus challenged on which he had founded so important a public document. His instructions had been so general that the responsibility of the list rested with him almost exclusively. How was he to meet and defeat the objectors? The question raised could only be settled by the authority of eminent mathematicians, and to them he resolved to appeal.

The night on which the "principle" was first attacked, he drove, in considerable excitement, from the House of Commons to Woolwich, to consult his old master and friend, Professor Barlow. Miss Barlow remembers the occasion well; the carriage driving to the door at a late hour, and remaining there for hours, during which Drummond was closeted with her father. They discussed the question from about eleven o'clock P.M. till nearly three o'clock in the morning. The Professor would not at first admit the correctness of the calculation; but finally he was convinced, and Drummond returned to town with the first written authoritative approval in his possession. Professors Airy of Cambridge and Wallace of Edinburgh were next consulted, and both of them pronounced in Drummond's favour. The authority of his friend Herschel, could he secure it, would be great, but he he had a delicacy in consulting him. From this he was relieved by Captain Beaufort:—

"ADMIRALTY, *January* 10, 1832.

"MY DEAR SIR JOHN,—Most fortunately for your happiness, you have neither time nor taste to enter into the politics of this stirring period of our history. You have, nevertheless, probably seen some account of the attack made on our friend Drummond by Mr Croker, since reiterated in the newspapers, even in the *Courier*, which supports the Government. This

point will be undoubtedly much canvassed in the House, and as ninety-nine out of every hundred of its members have no means of deciding such a question, and would be ready to bow to the opinion of any one who stands high in that of the world, it would be a great relief to poor Drummond if (purely as a mathematical question, without reference to its application) you would simply state your opinion of the principle that he has adopted. He is, however, far too delicate to risk the annoyance of your feelings by either inducing you to do what would be disagreeable, or compelling you to refuse. I have, therefore, taken the great liberty of enclosing some of the papers to you; and if you would hint to me that you had no great reluctance to give your opinion, he would immediately write to you clearly on the subject; or, on the other hand, a single word from you will put a stop to the whole affair.—I am, very faithfully yours, F. BEAUFORT."

To this appeal Sir John immediately responded, examining at great length the whole conditions of the calculation, and giving a general adherence to the method which Mr Drummond had followed.

The discussion of the question was resumed in Parliament on the 20th February 1832, on the question being put "that Old Sarum, Wiltshire, should be inserted at the head of Schedule A, instead of Alborough, Yorkshire." The attack on Drummond was led by a distinguished mathematician, Mr (afterwards Baron) Pollock. He was listened to as Englishmen know how to listen to a senior wrangler on a question of computation. He contended at considerable length that the method of *adding* the numbers in the two series was erroneous, and that the only mode of giving equal weight, in estimating of the relative importance of a borough, to the number of houses which it contained and the amount of assessed taxes which it paid, was by multiplying together the numbers in the

two lists which related to the same boroughs. He was immediately followed by Lord John Russell, who, after some general reasoning on the subject, said—

"He replied upon it not on his own authority, but on that of the greatest mathematicians of the country, and had no hesitation in saying that the principle of Lieutenant Drummond was the only one that could with propriety be adopted. It was a strict mathematical question, and he had the opinion of a distinguished mathematician upon the subject at present in his hand—a gentleman, he was sure, who was well known to the majority of the House—he alluded to Professor Airy of Cambridge—which was distinctly in favour of the principle adopted by Lieutenant Drummond; and he had also the opinion of another learned mathematician, Professor Barlow, who stated that the principle was not only correct, but indispensable, according to the provisions in the instructions given. The same question had been put to Professor Wallace of Edinburgh, who not only in his reply approved of the principle, but went much into the details, thereby showing he had studied the problem, and after consideration had come to the result that the principle was a correct one. There was another opinion which he had the authority of Captain Beaufort to mention. It was that of Sir John Herschel, also approving of the principle. He thought he had said sufficient to satisfy the House that the principle pursued by Lieutenant Drummond had not been adopted in ignorance of a science which, on the contrary, was one he had long studied."*

After some observations from Mr Pollock, the debate became general. But the mathematical question was now settled by the weight of authority, and further attempts within the House to show that there was a "radical error" in the computation were rested on general considerations merely. Old Sarum was in the end duly placed at the head of the list for disfanchisement, and thereafter fifty-two of the fifty-six boroughs

* *Times'* Report.

in Schedule A were also disposed of in their order in the list.

We have Mr Drummond's view of this debate in a letter written to his mother on the day after it:—

"We are in the heat of our battle. Last night was the commencement of disfranchisement, and therefore of the attack on the principle adopted by me in the classification of the boroughs. The debate was an animated one for such a subject, and terminated very much to the satisfaction of all our friends, and I was congratulated upon it as a complete triumph, or perhaps a better term would be, vindication from all the previous attacks. Mr Pollock was a senior wrangler at Cambridge, and is a clever man, so that his defeat prevented any other person from following the same course. Croker's tone and manner were very different from what they were the night on which he commenced the attack some weeks ago, so that I could not but feel highly gratified at the result. A great many of us [the commissioners] were collected under the gallery in the House, and we came away in high spirits."

If Mr Croker's language was milder on this than on preceding occasions, he made up for the want of bitterness in the debate on the night of 21st February. The four remaining boroughs in Schedule A were on this night to be disposed of. On the motion that Appleby be not put in the Schedule, Mr Croker again assailed the Drummond list, attacking this time, not the principle, but the returns on which the calculations were founded. "The Government," he said, in referring to Mr Drummond, "have, I think, taken a blind guide to form a new constitution, for than these returns nothing could be more erroneous." This was mere license and discourtesy. The returns were furnished to Mr Drummond, and were just the part of the affair for which he was not responsible. The motion was negatived by a large majority. The other boroughs were then in

order disposed of, and the Schedule stood as it had been drafted.

This was his first triumph, but though it occurred in the heat of the battle, it was far from being his last struggle in connection with the bill. "It required all the energy and all the application for which Mr Drummond was so remarkable," says General Larcom, "to prepare the data, and meet the objections to his calculations; toilsome days and sleepless nights; the Home Office in the morning, and then the House; and after the division, often no sleep till he had satisfied himself the objections which had been raised were futile, and till fresh evidence was prepared to bear upon the doubtful point. Every borough the subject of a contest, even some high names in science for a moment arranged against him; but, some convinced and some defeated, the bill at length was carried. I well remember the calm and solemn feeling with which, the morning after the third reading in the Lords, Drummond stood and summoned to memory a brief review of all its stages, pausing from time to time when objections had been made to his own labours, and finally dismissing all with the firm conviction that he had done his duty to the Government, and aided a cause he conscientiously adopted as his own."

Drummond's services on behalf of the Government on this occasion were rendered gratuitously.* Miss Drummond states, that the Government offered him an honorarium of L.2000, but he declined it. At a later date (1834) these services were made one of the grounds of conferring on him a pension of L.300 a-year. This pension Mr Drummond drew from 15th

* See "Report of the Select Committee on Pensions," dated 24th July 1838.

November 1834 till the 30th June 1835, after which he declined to receive it.

It seems proper to close this account of Drummond's first political services, by saying something of the mathematical controversy to which they gave rise. That controversy may merit notice at a time when a new Reform Bill is under discussion, and when advocates have appeared of principles which demand a general determination of the relative importance, not of the parliamentary districts only, but also of the individual citizens.* The advocates of such principles may see more clearly the difficulties of making an assessment of individual merit, judged of by several criteria, few of which seem capable of being expressed by numbers, when they consider those experienced in determining the relative importance of a mere handful of boroughs, tested by two criteria only, both directly expressible in numbers.

The pamphlets written against the principle of computation applied by Mr Drummond, have fallen into an obscurity from which it would take more trouble than it is worth to rescue them.† That there were several, I know from Sir John Herschel, who has obligingly put at my disposal copies of answers which he wrote at the time to two of them, and which give a good idea of the whole *pros* and *cons* of the controversy.

* The Scheme of Reform propounded by Professor Lorimer of Edinburgh, is one of the class referred to. He would assign to every sane male adult a number of votes proportional to his "social weight," of which his age, wealth, education, profession, and University degree are suggested as the criteria. It seems impossible that the weight of any one, according to such tests, could be expressed in numbers, otherwise than at hap-hazard.

† I have been unable to find any of them in the Advocates' Library.

Put algebraically, the question was as follows:—A (a borough's importance), is a function of B (its number of houses) and C (the amount of assessed taxes it pays). A varies with B; it also varies with C. What is to be assumed as the form of the function, when equal weight is to be given to the variations of B as to those of C? Is it $B + nC$, or BC, or $\sqrt{BC}$; or what is it? This seems all that is necessary to be said in the way of preface to Sir John's lucid letters.

In the following letter he puts "the equitable considerations" which enter into the determination of the form of the function, in a particularly clear common-sense light:—

"SLOUGH, *February* 29, 1832.

"SIR,—I acknowledge, as speedily as circumstances permit, your pamphlet on the Borough question; and the inscribed note, in which you request my opinion of the principle you advocate, viz. . . . [the product principle]. This principle you support in express and pointed contrast to that adopted by Lieutenant Drummond, and of which Lord J. Russell expressed, and correctly expressed, in the House the other night, my approval, as well as that of several well-known mathematical authorities, with whose opinion I then for the first time learned (to my satisfaction) that my own coincided. This latter principle may be thus stated, viz. . . . [the addition principle.]

"After the best consideration I have been able to give to the subject, and reading the arguments of more than one advocate of the 'Product' side of the question, I find myself still adhering to the *sums*, and regarding the *products* as untenable.

"When I speak of the principles thus, for brevity, as those of the products and sums, of course I suppose them rightly understood and cleared of factitious difficulties, such as that which some have found so puzzling, arising from the different denominations in which money may be reckoned, &c.; and

likewise those which in the latter may arise from different modes of estimating the proportion of importance of one house to one pound. This is quite another consideration. The question mainly put at issue lies between two abstract principles.

"My objections against the *product* principle are these:—

"1*st*, That its representation of extreme cases is radically defective, deviating entirely from common parlance, and from all fair conventional meaning of the word 'importance.'

"2*d*, That on this principle, *a* pound of assessed taxes, or *a* rated house, has no intrinsic fixed importance, but one entirely accidental; so that in some cases the addition of a few pounds assessed taxes or a few rated houses *may* produce a most extraordinary influence on the estimated importance of a borough, while, in others, the same additions may have very little influence.

"3*d*, That it places its advocates on one or other horn of the following dilemma:—Either the importance is estimated by the immediate product, or by its square root; if by the immediate product, then the two halves of a borough do not make the whole; a borough of one hundred houses and one hundred taxes is equivalent to four boroughs of fifty houses and fifty taxes, which is manifestly absurd; for, let the latter four be *juxtaposed*, they will then form a town *twice as large* and *similarly* inhabited as to wealth, luxury, &c. On the other hand, if the square root be adopted, what becomes of your theory of ratios? Let there be two boroughs each of one thousand houses, but let one pay three hundred and the other two hundred taxes; then will six of the latter be equivalent only to two of the former. Here, then, all have the fair influence of six hundred taxes *annihilated* by the mere accident of position.

"To return to my first objection. Usually the argument from extreme cases is one liable to be much abused; but it is always considered a fair trial of a mathematical principle if logically conducted, and in this case it is essential, because the two principles run pretty parallel in cases where the numbers follow an average or medium proportion, and it is only in proportion as the numbers *tend towards* the extreme cases, that their

different results become felt. If there were *no* great deviations from an average proportion between the numbers of the two criteria, *then* no rule would be required. A rule is called for by the observed fact that there *are* deviations—and very great ones —nay, extremely, surprisingly great. To grasp such cases fairly, the rule ought to extend a great deal farther without *palpably* offending common parlance. Let us, then, take as an extreme case—two boroughs, each of a thousand rated houses, but one paying £10, the other £20 assessed tax. (There is nothing *impossible* in such a supposition.) Now, it certainly would do great violence to the ordinary acceptation of words to declare one of these places twice as *important* as the other. At all events, such declaration would be completely at variance with the assumption which is the groundwork of the new Bill, that *taxed wealth* and *rated population* are treated as on a footing of equality. (The case might be put the other way with the same result.)

The force of my second objection will be self-evident on looking down the printed columns. Add a pound to the taxes of Bletchingley, it makes ninety-six units difference in your estimate of its importance. Add one to Sudbury, it makes 1189, a quantity expressing in your scale more than the *joint importance* of *two whole boroughs*. Again, add a house to each, and the difference of results is no less striking—the square root palliates, but does not destroy this.

"Thus, sir, I have, according to your request, stated my opinion of the principle you have adopted, confining myself entirely to the abstract mathematical view of the case, the only one in which my opinion can be supposed to have had the slightest weight in the assembly where it was cited in favour of the rival principle, which, I must repeat, appears to me liable to none of these objections. Difficulties there certainly are in its application, but not greater than might be expected in a case where so many and such complicated interests are to be disposed of. I trust you will deem this reply sufficient to excuse me from entering into further correspondence on the subject, which, after all, is one that has acquired what I consider an exceedingly undue importance,

and occupied a share of parliamentary attention which I think might have been far better employed.—I have the honour to remain, sir, your obedient servant, J. F. W. HERSCHEL."

To a pamphleteer, a mathematician of some standing, Sir John the same day wrote :—

"SLOUGH, *February* 29, 1832.

"DEAR ——,—I received at one A.M., a few mornings ago, your pamphlet on the Borough question, which, whatever else may be said of it, is at least lively and pointed. Though I think you wrong, I cannot call you dull, which is more than I can say of some others who have sent me their lucubrations on this vexed question. . . . In your first letter you say, 'If A varies *as* B,' &c. Here you fall into the usual error of confounding *as* and *with*—an error from which I should have thought your mathematics would have kept you free. I deny that it varies *as* B. It is a *petitio principii*. I admit that it varies *with* B; that is to say, that when B varies, A varies also (C remains fixed, or at least not counteracting the variation of B). A is a function of B and C. But the *question* is about the *form* of that function, whether it is BC, or $\sqrt{BC}$, or $\overline{B+C}$, or $B + nC$. Drummond has assumed, and I think correctly, $B + nC$. You want to prove him in error; and to do this, you *assume* the form BC, and, of course, it follows, as plain as daylight, that all other assumptions are wrong. So much for the logic of your first letter; for, as to the analogies on which you ground the assumption, there is not the shadow of an argument to show that they bear upon the question.

"Well, having demolished $B + nC$ by setting up BC, in your second letter you wipe away BC with a dash of your pen, and set up $\frac{B^2}{C}$. Now, in the outset of this, you again fall foul of poor Drummond, in a way which, I am sure (I now speak seriously), your better judgment will lead you to regret (page 14). You say, '*Lieut. Drummond* takes it for granted, that if the population of any number of places are the same in amount, their importance will increase and diminish *with* their wealth.'

Here you use 'with' in its correct sense; and you then go on to show that you apprehend clearly the distinction between *with* and *as*, which you had before lost sight of, by saying, 'It is true that their importance would, to speak mathematically, vary according to some power or function of their wealth.' Now, so far all is well, for Drummond's 'function' is $B + nC$, which is a *function* both of B and C. But you then go on to say, that Drummond takes it for granted that if the total wealth of two places is the same, their importance and number 'is in direct proportion to the population.' Now, he takes for granted no such thing. He assumes the function $B + nC$; and I put it to you as an algebraist, whether $B + nC$ *is* in direct proportion to C? I grant you that it increases when C increases, which is incompatible with your formula $\frac{B^2}{C}$; but you have no right, in maintaining that formula, to accuse another of a mathematical blunder of which he is not guilty, especially when the blunder *leads direct* to the conclusion which is advocated by all his opponents but yourself (and even by yourself in your first letter). For if it were true that Drummond *had* made that assumption, *then* the reasoning, 'if A varies as B when C is given, and A varies as C when B is given, therefore A varies as BC' would hold good. BC would triumph, and $B + nC$ must hide its head.

"Of course you have a clear right to set up $\frac{B^2}{C}$, and fight for it with pen or sword, as a general political principle, by which nations may be best represented. For aught I see, it has as good a chance as its neighbours; but the point at issue in the House the other night was, whether Drummond, *acting on certain data and instructions put before* HIM, had adopted a fair and correct principle for estimating the relative importance of the boroughs in a certain list—always remembering that the ground on which the Government and the opposition have agreed to discuss the question is, that TAXED *wealth* and RATED *population* are to be treated as on a footing of equality. This is the acknowledged concession of Ministers to common sense in the new Bill. The Tories would fight for ALL WEALTH, NO POPULATION. The Hyper-Tories would make population a

positive drawback. The Radicals would have ALL POPULATION, and *take effectual measures that there should be no wealth.* Well—parties (*'mirum'*) had agreed so far as to admit, *pro tempore,* as a ground of discussion, to put poor B and C on a footing of equality in the *very narrow* arena of the rotten boroughs, and so the thing was put into Drummond's hands. Suppose he had adopted instead of P + W,* such a function as $\sqrt{PW}$, or $\sqrt{P^2 + W^2}$, or any decent *symmetrical function,* one might have stared, and set it down to the profundity of his researches; but had he taken $\frac{W^2}{P}$, what would have happened? Why, Lord Melbourne would have snatched the papers out of his hand. The Whigs would have called him a madman, the Tories a martyr, and the point would have been handed over to some plodding man *without a party,* who would be content to take the quiet responsibility of drawing a steady line between two great conflicting interests. (*N.B.*—W = B, P = *n* C.)

"Had the question been referred to me, I could have done no otherwise. I might have adopted a slightly different numerical value of *n* (for that I admit a point of some nicety); but I would not have deviated from the form P + W (= B + *n* C.)—Believe me, yours very truly,

"J. F. W. HERSCHEL."

The mathematics are a severely just science, and we may judge from these letters what the results would be of applying its logic to the system of representation. "Parties *(mirum!)* had agreed to put population and wealth on a footing of equality *in the very narrow arena of the rotten boroughs.*" Sir John turns his eyes from the stars to the political world, not without astonishment at what he sees going on there. It is the world which Drummond, who also is somewhat severe in his logic, and not without discernment of celestial and other harmonies in nature, is about to enter. Perhaps he also will presently find there matter for

* P = Population, W = Wealth.

astonishment, and by the severe logic arrive at some new Drummond light suitable for doing brilliant service to his fellow-men.

The passing of the Reform Bill brought Mr Drummond a short interval of comparative rest. The reaction from severe labour set in with the diminution of the sustaining excitement, and was, as usual, illness and exhaustion. "Brighton and its air and exercise recruited him," says Larcom, "but more than this was the heartfelt joy he received from the approbation and friendship of his brother commissioners. His task had been one of much delicacy as well as labour, and of all the compliments which awaited him none was more gratifying than the letter addressed to him by the gentlemen with whom he had acted in the Boundary Commission." The letter here referred to, which the General adds was "as honourable to those by whom it was written as to him to whom it was addressed," was as follows:—

"LONDON, *June* 6, 1832.

"DEAR DRUMMOND,—We, who have been your fellow-labourers in the task intrusted to us by the Government, of recommending the proper limits for boroughs under the Reform Bill, entertain an anxious desire, before we separate on the completion of our labours, to express to you in some marked manner our esteem and admiration of your conduct of that work.

"We entertain no doubt that the Government will take the earliest opportunity of adequately discharging the great obligations it owes you, which can be duly appreciated only by considering the consequences if they had found in you anything short of the most perfect integrity, the most active zeal, and the most acute intelligence.

"But something would still be wanting to our own feelings, were we not to contrive some method of denoting our sense of the sound judgment and amiable manner which have marked

your whole intercourse with us, making it a source of pleasure to ourselves, and contributing in no small degree to the perfection of the harassing duty in which we have been engaged.

"After much consideration on the most appropriate method of recording these feelings, we have resolved to request that you will do us the favour to sit for your portrait to one of the best artists of the day.

"We hope this will be preserved in your family as a memorial of the sense entertained of your merits by a number of gentlemen who have acted with you in the execution of a delicate and arduous duty, intimately connected with an important event in the history of our country.—We remain, dear Drummond, your attached friends,

"E. J. LITTLETON.
F. BEAUFORT, R.N.
L. B. ALLEN.
B. ANSLEY.
THOS. B. BIRCH.
H. R. BANDRETH.
J. J. CHAPMAN.
R. D. CRAIG.
ROBERT K. DAWSON.
J. ELLIOTT DRINKWATER.
J. F. ELLIS.
HENRY GAWLER.
H. BELLENDEN KER.
HENRY W. TANCRED.
G. B. LENNARD.
W. H. ORD.
JOHN ROMILLY.
ROBERT SAUNDERS.
RICHARD SCOTT.
R. SHEEPSHANKS.
W. EDWARD TALLENTS.
JOHN WROTTESLEY.
W. WYLDE."

The portrait was painted by Pickersgill, and presented to Mr Drummond's mother; after his death it was engraved by Cousens; it now hangs in the Court-Room of the Edinburgh University. An engraving of it by Burton is prefixed to this volume.

CHAPTER XI.

THE EDINBURGH AND LEITH DISTRICT ELECTIONS; DRUMMOND'S LAST SCIENTIFIC EMPLOYMENTS; HIS SCIENTIFIC CAREER.

As the time for the General Election drew near after the passing of the Reform Bill, Mr Drummond began to take considerable interest in the election proceedings in Edinburgh and its neighbourhood. A contest was impending between Sir George Murray and Lord Ormelie in Perthshire, and thither Mr John Drummond had gone in July, to use his influence in the Comrie and Drummondernoch districts in behalf of Lord Ormelie, the Liberal candidate. In the Leith district preparations were making for a contest between John Archibald Murray, afterwards Sir John (the late Hon. Lord Murray, the most amiable of Scotch Whigs and Lords of Session), and Drummond's old friend, Mr Aitchison of Drummore. In Edinburgh, Mr Abercromby (afterwards Lord Dunfermline), and Mr Francis Jeffrey were looking forward to a struggle with Mr Hunter Blair, a Tory or Conservative, and Mr Aytoun (the Radical, not the poet). In all of these contests brother John, the advocate, was taking a more or less efficient part as a canvasser, and in regard to all of them Mr Drummond corresponded with him from time to time.

These election letters are interesting, as the first revelations of his feelings about human relations other than those of the family. Up to this time the details of practical services and scientific operations are the main burden of his correspondence, so far as not devoted to matters of family concern. The man is seen as son and brother, but not as citizen. He now begins to appears as a citizen, exhibiting a fine moral sense, supported by a spirit of chivalry in the discussion of social rights and obligations.

As to the canvass against Sir George Murray, he writes to his brother:—

"I rejoice at any occurrence which calls forth your exertions and brings you into action. But I fairly own to you that I wish your exertions had been directed against another opponent than Sir George Murray. He is in every respect so estimable a man, and so fit to represent a county, especially in a reformed Parliament, that I regret his return being opposed. . . . Your calmness and good sense will prevent your being betrayed into any rash or unbecoming expression towards your opponents; but it is right that I should tell you that Sir George Murray is a man universally respected by all parties for his ability, moderation, and fairness, and therefore I hope you will be betrayed into nothing, either in word or deed, that is disrespectful towards him. I don't say this to damp your ardour in the cause in which you are embarked, because I am sure that it would be injured rather than promoted by any conduct which had the appearance of disrespect; I say appearance, because now that I have told you the opinion entertained of Sir George, I feel perfectly satisfied that your canvass for Lord Ormelie will never be conducted in a way offensive to Sir George or his friends."*

If the spirit of this became general, a man might have less scruple in becoming a candidate in a contested election. The prevailing spirit is, unhappily, so

* Letter to Mr John Drummond, July 12, 1832.

different, that men of keen sensibility are apt to shrink from the attempt to get into Parliament. The issuing of an address to electors is often a signal to the ruffians of the district, educated and uneducated, who are opposed to the candidate, to traduce and slander him, to call in question his honesty and even his religion, so that, after a few weeks, one believing all that is said would as soon vote the man to the gallows as into the House of Commons.

Mr Aitchison of Drummore was represented as being indignant that John Drummond, one of a family which he had befriended, presumed to canvass against him in the Leith district in behalf of John Archibald Murray. This being communicated to Drummond, he defended the course his brother had taken, in the following letter:—

"Council Office, Whitehall, *Sept.* 14, 1832.

"To William Aitchison, Esq.

"My dear Sir,—Having, after twelve months' severe and anxious toil, brought our labours to a close, I have transmitted to Scotland a copy of our Reports on the Boundaries of the Boroughs of England and Wales, which I request you will do me the favour to accept.

"I send these volumes to you, not with any reference to their political nature, but as I have sent my former papers, as marks of respect and regard for my early friend and benefactor.

"It is but right, however, that I should take the same opportunity of adverting to a circumstance of a less agreeable nature, and one which has occasioned me considerable pain.

"I have heard that the part which my brother has taken with respect to Mr Murray's election has occasioned you much surprise, and that you have expressed much dissatisfaction, perhaps I might say indignation, at his conduct. I sincerely hope, indeed I firmly believe, that this is a very incorrect or a very exaggerated statement.

"I am well aware that any assistance which my brother can render Mr Murray must be of very small amount, and that it is to the disposition evinced by the act that your observations have been directed, if indeed any such have been made. In common justice to him, therefore, and in some measure to myself, I would solicit your attention to a very few observations.

"I am well aware that the political opinions either of my brother or of myself must be a matter of perfect indifference to you; nor would I allude to them at all, but that I cannot help feeling that you are disposed to attribute less influence to such opinions than they usually possess—and, as it appears to me, they ought to possess—over the mind and actions of any man who has sufficient judgment to be able to form an opinion at all, and sufficient honesty and firmness to act according to it. You will, I trust, pardon me for saying that the consequence is, you are, perhaps, apt to suppose that disrespect and ingratitude are manifested in that conduct, which is the result of very different and much more worthy motives.

"The opinions which we hold were not taken up yesterday or to-day;—they were constantly avowed, so far as is possible to men who hold no public situations—that is, by discussion with their friends and associates; and they were held, too, when they were not the road either to favour or preferment. If they have brought us into connection with men who have ever been the consistent and powerful advocates of such opinions, I think we are bound, in common with every individual who entertains the same opinions, to use our utmost exertions, however feeble these may be, in favour of such men—even if, by so doing, we should have the misfortune to be brought into opposition—I do not say into collision, for I hope and trust that is not necessary—with those with whom we are connected by the dearest ties of relationship or of friendship.

"Mr Murray and myself were engaged last winter in the same political work; we met nearly every day; and, warmly attached as I am to the principles of which he has long been a strenuous supporter, I could not, without forfeiting every feeling of self-respect, hesitate to render, if required, my zealous though feeble assistance to promote his return to Parliament,

in opposition to any man of contrary opinions, even if that man should unfortunately prove to be my nearest relative, or my most intimate friend. The same considerations had necessarily the same influence over my brother.

"I am not ignorant that the firm adherence to opinions may sometimes require many a painful sacrifice, and lead to many a painful separation between relatives and friends; but this, I trust, can only happen when there are any who are resolved not to discriminate between the obligations resulting from the relations of society, and those which, in the discharge of a political right, are imposed by an honourable and consistent maintenance of conscientious opinion. Fortunately, instances of such discrimination, alike honourable to both parties, are not rare; and, indeed, among my own relations, I see a complete division of a family in political subjects, without any interruption of the duties or the pleasures of family intercourse.

"Whatever my brother does, he will do openly and honourably, and I earnestly request you dispassionately to consider the circumstances which I have stated, and then I cannot doubt but you will, with your accustomed liberality and kindness, do justice to the motives which have influenced us on this occasion.

"I feel that I have trespassed on your time and indulgence by this explanation, which I have endeavoured to make, and, I trust, have made with that deference and respect not only due from me, but which I most unfeignedly feel towards you, my old and valued friend. May I beg my best respects to Mrs Aitchison, who, I sincerely hope, is tolerably well.—And I remain, my dear sir, with great respect, very faithfully yours,

"T. DRUMMOND."

Mr Aitchison did respect to the motives here so well defended. As to the election contest, finding he had no chance, he retired, and Mr Murray was elected without opposition.

By November 1832 Drummond returned to London, and, for a time, to the duties of the Survey. On the third of this month died Sir John Leslie, formerly Professor

of Mathematics—but at the time of his death Professor of Natural Philosophy—in the Edinburgh University. The Town Council of Edinburgh were looking out for a successor to him. They offered the post to Sir John Herschel, but he declined it. It seems that they next offered it to Mr Drummond; at least, a party in the Council must have solicited him to come forward as a candidate. In a letter to his brother, dated November 14, 1832, he says:—"I saw the Chancellor yesterday evening; he exclaimed against my accepting the professorship. You know I had already declined it for different reasons. . . . I have had a letter from my mother this morning entreating me to accept the offer. I have written to her explaining the whole grounds of my refusal [the letter has not been preserved], what the Chancellor said, &c. . . . The Chancellor told me he understood Dr Brewster had applied; if so, he should be the successful candidate." He was not, however. Another was preferred, and Sir David's connection with the University (as Principal) was postponed for nearly thirty years.

Drummond's task at this time in connection with the Ordnance Survey was to prepare for publication an account of the measurement of the base at Lough Foyle, which, it is much to be regretted, he never finished. He had, early in 1830, prepared a sketch of the operation in a lecture for the Royal Institution. He now drew up a synoptic view of former bases, with a brief notice of their merits and defects. In the preparation of this paper he was led to the study of Probabilities; and La Place, says Larcom, was, it is believed, his last mathematical reading. He would probably have finished his account of the measurement of the base but for two reasons—that additional experiments were required for

the comparison of the new standards and those formerly used, and that it was necessary to await the final decision of the Legislature on the actual standard. On the experiments for comparing the old and new standards Mr Drummond was engaged, along with Mr Simms and the Rev. Mr Sheepshanks, in March and April 1833.* This was his last scientific labour. In April 1833 he became Private Secretary to Lord Althorp, then Chancellor of the Exchequer, and for the rest of his life all his labours were of a social or political nature.

Mr Drummond's scientific career was a very short one, extending over little more than seven years, during which he was also engaged in discharging the laborious duties of his profession. Many of these duties, indeed, were of a scientific nature—the work of observation and calculation; but many of them also involved labour rather of the body than of the mind. The scientific labours by which he will be remembered, are not those of the service immediately, but those undertaken from time to time to meet its various exigencies.

If Mr Drummond had not been led by a genuine love of science to its cultivation in the earlier years of the service, he could not possibly, in the later years, have advanced its interests as he did. But we saw that by 1824 he had been engaged on researches on light; was an ardent student of meteorology, and a good chemist and optician. He had previously been an excellent and ingenious mathematician. In 1824 he began to apply his resources to render the Survey worthy of the contemporaneous state of science, and to

* The results appear at page 12 of the Appendix to Captain Yolland's "Account."

employ in the interests of science the opportunities of observation which the Survey operations afforded. The results we have seen.

I have already mentioned the opinions of two distinguished astronomers, as to what his success would have been had he elected to follow science instead of politics. It was the view of both of them that it was a grave fault on his part to have deserted scientific for political pursuits. Men who respect the smallest quantities that the micrometer can measure or the balance can weigh, and who religiously regard such principles and laws as are established in nature, are apt to look with scorn on the methods of politicians and the unprincipled conflicts of interests in which they are commonly engaged. But the chief ground of complaint was, undoubtedly, the belief that Mr Drummond would have been a distinguished promoter of the science in which they themselves were more immediately interested—the science of astronomy. We saw that Mr Drummond had become a Fellow of the Royal Astronomical Society, and expressed his resolution to qualify himself for being an efficient member. There can be little doubt that, had he not embraced political occupations, he would have become especially distinguished in that field.

Excellent as were the means of astronomical observation, they were yet capable of great improvement. To a considerable extent they have, in the interval, been improved. Drummond possessed just the combination of talents requisite for their immediate improvement. As an observer in the field, he had been as successful as in experimenting and working in the laboratory;*

* His first experiments on the expansion and contraction of metals were executed with such care, and the results were so exact, every precaution being taken that a full knowledge of the

on the other hand, his resources for overcoming difficulties of observation were, as we have seen, of the highest order. "When he quitted the walks of science," says Sir John Herschel, "for the high and efficient line of public life which called forth the full exertion of his great powers, the impression was general that his success as a man of science, had he desired it, must have been of a very distinguished kind. A strongly characteristic feature of his scientific undertakings and improvements was their eminently practical nature, and the directness with which they attained the distinct object in view, by means highly ingenious and quite out of the common line of contrivance, yet meeting fully and precisely every exigency of the case."* The distinguished astronomer has assured me that he had looked for great things, from this faculty of contrivance in Drummond, on his betaking himself to astronomy.

The foundation of his success as a contriver was the clear apprehension he always formed of the whole conditions of the problem to be solved. He had been distinguished at Woolwich, as Professor Barlow states, just by possessing this faculty. Every point of difficulty being understood, his mind was ready to receive suggestions on any one. His professional enthusiasm came in aid of constitutional alertness to follow every hint. The mica experiments, as Herschel points out, form a remarkable illustration of this disposition. Clear-headed and prompt, his powers of contrivance seemed inexhaustible. No one could be readier with a test of any proposal, or with

conditions of the inquiry could dictate, that, after being repeatedly tested, they were ever after assumed as correct in experiments of the same class conducted by the Survey officers.

* Letter to Mrs Drummond, May 12, 1840.

the means of giving it effect when it was seen to be feasible.

His first heliostat is the only contrivance which looks as if it had been reached by a process of reasoning. It was a solution by construction of a problem in geometry —the construction done in delicate machinery. His other contrivances were all *hits;* the conception of them must have flashed on his mind. The idea of placing a small lime-ball in the focus of a reflector as a source of light, was an exceedingly happy one. The device for regulating the rates of expansion in the measuring bars was novel, and almost as ingenious as that for marking the compensation points. The second heliostat, with its accompanying ring, must have presented itself to his imagination in a flash of thought. Nothing could be more simple or perfect for its objects.

It cannot be said, however, in regard to any of his principal contrivances that the germal idea belonged to him. The principle of compensation is the honour of Graham and Harrison. Drummond's merit, assuming it to have been his, was that he made a novel application of it. The use of the solar reflection to mark a station was as old as General Roy—probably, as Larcom remarks, coeval with the earliest geodetical operations of any magnitude. Drummond made its use easy and certain, superseding the difficult computations that had previously been required for each station.* The oxyhydrogen light was known before Drummond gave to it celebrity and his name; yet in this, as in the preceding cases, the merit of what he did was of a high order. "It consisted," says Herschel, "in the ready seizure of

* Gauss, in Germany, was earlier than Drummond in constructing a heliostat, but Drummond was quite unacquainted with the instrument of Gauss, or the fact that it existed.

fact precisely bearing on his own case, and its perfectly effective application to a particular object in view." "His merit," says Larcom, "was in rendering practically useful a recondite experiment—by devising a means of procuring and using without danger agents so turbulent as the mixed gases, making the apparatus sufficiently portable and simple to be employed in the circumstances of exposure required for the Survey, and, perhaps more than all, for the happy idea of using the minute spherule of concentrated light as the radiating focus of a parabolic mirror." After every limitation has been stated, it remains that his applications of pre-existing elements affect the mind with the full impression of originality.

The power of contrivance is essentially one with the faculty of discovery. Both depend on the perception of secret relations. In which way the faculty may manifest itself, is a matter of circumstances. In Drummond's case it was exercised in the sphere of duty in which he was placed, and to which he devoted his energies. It can scarcely be doubted that the same power exercised in a different sphere would have won for him a high place in the list of names celebrated in the history of scientific discovery.

CHAPTER XII.

MR DRUMMOND BECOMES PRIVATE SECRETARY TO LORD ALTHORP: A PENSION IS CONFERRED ON HIM: HE BECOMES UNDER-SECRETARY OF STATE FOR IRELAND: HIS MARRIAGE.

MR DRUMMOND now enjoyed the friendship of Lord Brougham. It was of still greater importance that he had earned the confidence of the whole Ministry. Having done so, it was unlikely that he would be long left unemployed. In April 1833 he was solicited by Lord Althorp, the Chancellor of the Exchequer, to become his private secretary.

He did not accept the post at once. The dissuasions from a political career were renewed with increased force. There were other reasons for hesitation. Should he give up professional certainty for temporary political employment? He was not rich. To accept might be to desert military for civil pursuits, to forego the "standing" which he now had in the Engineers—he was still *Lieutenant* Drummond—and, as it were, to begin life again in a sphere remarkable for its uncertainties and vicissitudes.

One whom he consulted as to his course was his friend Mr Bellenden Ker. Miss Martineau, who often met him in the pleasant society of the Kers, gives some

account of the conference. "One evening," she says, "stands out clear in my memory among many which I spent in Mr Drummond's company. I was spending a day and night at the Kers'. After dinner Lieutenant Drummond called, and presently he asked for a private interview with Mr Ker. They just stayed with us for tea, and retired; and it was very late before they looked in upon us. On *his* part it was only to say, 'Good night,' and then Mr Ker told us what it was about. Lord Althorp, the Chancellor of the Exchequer, had sent for Mr Drummond to ask him to be his private secretary, dwelling much on this being 'the united wish of the Cabinet.' Mr Drummond also dwelt much on this, and so did Mr Ker in telling us—repeating the words again and again. Mr Ker's answer to the request for advice was *not* advice, but setting forth the alternative choice of scientific and political life. Mr Drummond was quite sure that he could hold by his profession, and return to it at pleasure. Mr Ker insisted that, whatever Mr Drummond now believed and intended, he would pass over entirely into political life, and live and die in it. They left off, differing as to the liberty which would remain if the office were accepted, but both evidently wishing that it should be accepted. Mr Ker fully believed that night that it would be, and he certainly desired it."* In the end he did accept the office, and became for a time the right hand of Lord Althorp.

Lord Althorp (afterwards Earl Spencer) was leader of the House of Commons as well as Chancellor of the Exchequer, so that Drummond's attention was now directed to all the political questions of the time. He was at once doing good work and serving an appren-

* Letter to Mr Robert Cox of Edinburgh, June 17, 1865.

ticeship. "The duties of his office," says General Larcom, "gave him much valuable insight into the details of public life, but were chiefly useful in enabling him to cement the esteem in which he was held by the members of the Government, and by none more than his noble chief, to whom the clearness of his conceptions and the straight-forward honesty of his mind were eminently congenial. There could be no greater compliment paid to him than was paid by Lord Spencer. 'One of the most pleasing recollections of his political life,' he is stated to have said, 'was that it made him acquainted with Mr Drummond.'"

The friendship which sprang up between his lordship and Mr Drummond continued till death interrupted it. In 1839 Lord Spencer, hearing that Drummond was in London, wrote to him to come to Althorp. "This gives me a chance of seeing you again once more before I die." Death was, however, to overtake the younger man first. When it did, the noble lord hastened to address to the bereaved mother words of comfort and consolation. It would be unfair to cite the tribute he then paid to the amiable qualities and indefatigable energy of his friend; a tribute in which, to enhance the merit of another, he made a surrender of much that was his own. The language of consolation is apt to be exaggerated, and eulogy in such a case to be strained to yield comfort. There must, however, have been a substantial foundation for the great regard, admiration, and appreciation which that letter expressed.

During 1833, Drummond's mother and sister were residing in London or its vicinity, and the correspondence, by means of which his course of action has so often been tracked, was suspended. From Miss Martineau, however, we have some notes of his occupations. "As

his business then lay in Downing Street," she says, "and I lived in the next street, Fludyer Street, he used to come to my study from Lord Althorp or Lord Grey when they wanted my opinion on measures which they were then preparing. . . . Our express business was (commonly) discussion of certain items of Lord Althorp's forthcoming budget, and changes in some of them, and consultations about Lord Grey's tithe measure, now forgotten in the final settlement. In these conversations I was impressed, as at all times, with Lieutenant Drummond's (as he was then called) diligent and earnest attention to the business in hand. *In those days* it was the one disclosure of the ardour which was otherwise concealed by a reserve, even distance or coldness of manner, which few then understood. The truth all came out when he went to Ireland. Before that, the impression of even his friends was, that while the most upright, honourable, diligent, and able of public servants and private gentlemen, he was somewhat cold of nature, and, in his personal regards, *politic* beyond even the repute of Scotsmen. All that set of impressions was effaced from the moment when his enthusiasm on behalf of Ireland began to shine out. By its light the former attributes became translucent and very beautiful; and warm admiration and affection succeeded to the respect and favourable expectation (cordial enough in their way) with which he had always been regarded.

"Yet there were signs by which people might have known more than they did; *e.g.*, he was full of concern, was really gravely concerned, while his friends were laughing at him for his apprehensions, that 'we *must* conquer China.' They nicknamed him 'The Conqueror of China,' while he had good reasons to give, and actually

did lay down the plan of future events, almost as accurately in the main features as if it had been done thirty years later. When the events happened, the friends remembered him and his reasons, and the gravity with which he offered them."

The summer session of 1833 having ended, Drummond set off on a series of long vacation visits. From Sir George Philips' he went to Lord Althorp's, and thence to Brougham Hall. To the last place he seems not to have been particularly desirous to go, but the imperious Brougham would take no refusal. "He seems determined," says Brougham's secretary, "that you *shall* go; and he adds, when you are together you can do a good stroke of work. He also says that he has written to the King, strongly adverting to your services, 'a strong panegyric on Drummond's services about the Borough Bill.' You must come. I know from experience that when he once sets his heart on anything, there is no rest till he has his way." He was obliged to go, and early in October returned to town, accompanied by the Chancellor.

By the following spring his mother had returned to the north, and the correspondence recommenced. There is not much to be learned from it, however. The spring was occupied with preparations for new bills on tithes, the poor-law, and church-rates. The letters abound in criticisms on the opposition of the *Times* to the new poor-law, and its assaults on the "lath and plaster Cabinet;" many of the letters, written to be shown to the late lamented Charles Maclaren, contain hints and suggestions for leaders in the *Scotsman*. If the *Scotsman* still receives such assistance, no one need wonder at its information being at once early and correct. Communications to, or for behoof of, Mr

Maclaren were made almost daily. At the same time Drummond was supporting the Government through the press in London, the *Globe* and *Morning Chronicle* being the chief of the Government papers. In the *Chronicle* at this time he wrote some leading articles, chiefly on questions of finance.

In May 1834, the attitude assumed by the majority of the Cabinet in regard to the question of the appropriation of the surplus fund of the Irish Church (raised first by a bill of Ministers in the previous year, and now again by an independent resolution brought forward by Mr Ward), led to the resignation of Mr Stanley and Sir James Graham, and also of the Duke of Richmond and Lord Ripon. This dissolved the Administration of Lord Grey. For a time it was doubtful who would succeed to the seals of office. The Commons, it was understood, desired an administration with Althorp for its head. His lordship, on the other hand, sick of government, was longing to escape from its cares. "He is so desirous to keep out," says Drummond, "that I do not think it likely that any combination of circumstances will prevent him." He was, however, prevented. The King sent for Lord Melbourne; and the condition on which Lord Melbourne would alone agree to undertake the difficult task of forming a Government was, that Althorp should continue to be Chancellor of the Exchequer, and leader of the Lower House. After much hesitation Althorp consented. "His services and situation entitled him," says Drummond, "if he had been actuated by the feelings of ordinary politicians, to expect that, if the Government continued in the hands of the Whigs, and if he was called to take a part in it, he should be placed at its head. He has sacrificed every feeling of this kind, if he has any; he has sacrificed his

desire to get out of office, that the Government may be retained in the hands of the Liberal party, and that our friends may not be sent to a new election." The first Melbourne Administration was destined, however, to be short-lived. In November 1834 Lord Spencer died, and Lord Althorp became Lord Spencer. His elevation to the House of Peers was seized upon by the King as a pretext for dissolving the Ministry. Lord Melbourne was for going on with Lord John Russell as Chancellor of the Exchequer, but the King sent for the Duke of Wellington.

The Duke could do nothing in the way of assigning the offices of state in the absence of Mr Peel, who was then in Rome. But, on the principle that "the Government must be carried on," he took on himself the whole business of the empire. It was the joke of the day, that the Cabinet sat in his head, and the Ministers were all of one mind! "Great bustle at the different offices," writes Drummond from Downing Street, November 18th. "The Duke has exhibited some promptitude in taking possession of the Home Office, but all the other appointments are yet undecided. The great seal is to be held provisionally. The seals of the different Secretaries of State are held provisionally by the Duke; and, in fact, everything is provisional till Peel returns. If a good spirit manifests itself in the meantime, it is possible that they may find greater difficulties than they now imagine in the way of forming a government. Peel has more sagacity and less courage than 'His Highness,' and may not be disposed to enter upon the desperate course which the latter seems resolved to attempt. Without Peel's assistance, it is over with him. Meanwhile, the Duke is doing what he can: he has shown the most indecent haste to seize the seals of

the Secretaries of State, and even sent for their Cabinet keys on Monday last, immediately after the Council. There is much more the appearance than the reality of vigour in this, and it simply disgusts people, even those who are against us. But it is in keeping with the political character of a man who has discovered that a large Church reform is necessary, and who has found a worthy supporter in that profligate and perfidious journal the *Times*." Hard language for His Highness as for the newspaper! I question whether the *Times* was ever so cordially detested as it was by the Melbourne Whigs.

Peel returned, and took the reins of Government. Parliament was prorogued on the 18th December, and dissolved on the 30th. The dissolution had been anticipated, and prepared for by the Reform party. On the 21st November 1834 Drummond wrote as follows to his brother John:—

"We consider the dissolution inevitable, and are preparing accordingly. The accounts from the country and from our friends are very satisfactory. They are preparing quietly, but actively and energetically, for the approaching election. The same will be done in Scotland. It is from the north, from Scotland and Lancashire, that the spirit will come. I hope Mr Maclaren will not attack the Radicals at the present moment. It is quite true what he says; but they are sensible of their errors, and this is not the moment to exasperate, but to soothe and conciliate. If there are any district committee-rooms to which you would wish the *Chronicle* or *Globe* to be sent, let me have the names, and it will be done. The *Chronicle* advances rapidly, so does the *Globe*. The *Times* quails and wavers, as such a miserable deserves to do. . . . I wrote to the Lord Advocate yesterday; pray tell him that I had a long conversation to-day with Mr Abercromby, who thinks the greatest caution must be observed, to prevent its being supposed that any committee is formed for the purpose of managing the

elections in Scotland. As little as possible should be said; and it should be given out, that it is merely for the purpose of distributing information. The subject to which this refers was what I wrote about to the Lord Advocate yesterday. He will understand it, and tell you."

About this time Mr Drummond again became seriously unwell, and retired to Brighton. On the 1st January 1835, his friend Robe wrote to Mrs Drummond:—

"Though I have not written, I have often thought of you during the late *bouleversement;* for, indeed, it must have been a most anxious time for you, especially when it was followed by Tom's illness, which I believe you did not hear of till his recovery was progressing. Indeed, I did not know of it myself till then. I have received a letter from him this morning, in which he tells me that he is a good deal better, though he expects his final recovery will be tedious, but unaccompanied by danger. He is a glorious fellow, taking his downfall so philosophically as he does. I am told that his pension was given by Lord Melbourne in the most handsome manner, and that Lord Grey had left a minute about it before he quitted the helm—which was still more flattering to Tom, because it shows they all felt the weight of his claims, though I wish they had felt them *heavier*."

The grounds on which the pension of L.300 a-year was given appear from the Report of the Select Committee on Pensions, dated July 24, 1838:—

"Lieutenant Drummond was a distinguished officer of the Royal Engineers, whose abilities had been shown, not only in the Trigonometrical Survey of Ireland, and the more peculiar branches of his 'profession,' but in the prosecution of various branches of science, in which he has made useful and interesting discoveries. He was employed by the Government of Lord Grey in procuring the statistical information on which the Reform Bill was founded, as well as in determining the boundaries and districts of boroughs. Those services were rendered gratuitously. He was afterwards employed in pre-

paring the Bill for the Better Regulation of Municipal Boroughs. Finally, he was employed from April 1833 to April 1834 as private secretary to Lord Althorp, Chancellor of the Exchequer."

By the 15th February 1835, Mr Drummond was so far recovered as to venture back to London. "I am quite well in general health," he writes to his mother, "and nearly so totally, and suffer no other inconvenience than limiting myself to more moderate exercise than I should otherwise be disposed to take. . . . On Thursday, as every body knows, the battle begins. I think we shall beat them on the Speaker. The numbers on Saturday pledged to support Mr Abercromby were 318." On the 21st he writes in high spirits to his brother. Of the 318 no less than 317 had voted, and the election of Mr Abercromby as Speaker was carried against the Government. The next triumph of the Opposition was carrying an amendment to the address, which Peel was forced to take to the King, with the discontent of his Commons attached to it. In the end of March, Lord John Russell headed a final attack on the Ministers on the Appropriation question. They were defeated, and Peel resigned early in April. There was a new Melbourne Administration.

In April the portrait of Drummond by Pickersgill was finished, and forwarded to Mrs Drummond, with the following letter from Mr Littleton, who by this time had figured for a while as Chief Secretary for Ireland, under the government of Lord Grey.

"GROSVENOR PLACE, *April* 10, 1835.

"MADAM,—I believe you have been informed that the gentlemen associated with Mr Drummond in the late Boundary Commission resolved, at the conclusion of their labours, to offer to him some testimony of their admiration of the talents he had

exhibited in directing the proceedings of that Commission, and of the great personal regard they entertained towards him.

"After much consideration, it was thought a preferable course to ask him to sit for his portrait, and when finished to present it to you. We found that such a present would be more agreeable to him than any other, and we did not doubt it would be most gratifying to you. Mr Pickersgill, the best of our artists, was accordingly employed to paint a bishop's half-length portrait of him, which he has executed with remarkable fidelity.

"It was our original intention to have had a mezzotint engraving made from it, in order that each of Mr Drummond's fellow-commissioners might have had a copy of it. Lord Althorp, Lord Brougham, Lord Lansdowne, and various others of Mr Drummond's political friends, equally desired to possess themselves of a likeness of one to whom they were attached, in common with ourselves, by a sense of obligations, and by personal regard. But your son so perseveringly insisted on the abandonment of this part of the design, that I was obliged to take upon myself to suspend the order to the engraver, who had actually commenced the work.

"It now only remains for me, in the name of all the Boundary Commissioners, to place the portrait in your hands, and to express my hope that it may long remain in your family as a record of the public and private esteem towards your son, entertained by a body who were associated with him in an honourable and highly important public trust.

"The portrait will leave town in a few days.—I have the honour to be, madam, with great respect, &c.

"E. J. LITTLETON."

The Liberal party were now again in power. Drummond was not forgotten. In July 1835 he went to Ireland, with Lord Mulgrave, as Under Secretary. The appointment met with the warmest approval of the press. A new regime was announced for Ireland. Lord Morpeth, who became Chief Secretary, was congratulated on having Drummond for his assistant. "He

could not possibly," said the *Examiner*, "have an abler or more respectable coadjutor, nor could the new regime have a more efficient supporter, or one more imbued with its spirit." "The situation of Under Secretary in Ireland is no sinecure," said the *Sun*. "It requires incessant vigilance and an unflinching spirit of determination, combined with a temperate and conciliatory nature. And these are qualifications which Lieutenant Drummond is well known to possess. He is not the man to fall asleep over his duties. We look on his present appointment as a great boon to Ireland, as another convincing proof that Ministers are fully in earnest in their endeavours to ameliorate the condition of that distracted country. Lieutenant Drummond's arrival in Ireland will, of course, create a sensation among the old Tory hacks of the Castle, some of whom are still to be seen with unoccupied looks and tottering frames, crawling about the scene of their departed glory." His immediate predecessor in the office was Sir William Gosset, whose dismissal the *Examiner* declared "was as good a piece of service as in a single act any Viceroy ever rendered to Ireland."

Drummond set out for Ireland on the 18th of July 1835. A few months later he married Miss Kinnaird, the ward and adopted daughter of Richard Sharp, Esq., well known in the literary world for his brilliant conversational powers. The lady possessed great personal attractions, and was, by mental qualities, admirably fitted to be the companion of so gifted and intellectual a husband. She had, moreover, a considerable fortune. Mr Drummond became engaged to her in the first week of June 1835, before he accepted the Irish Under Secretaryship. Having thus become independent of all salaries, he accepted the difficult and responsible post,

after due consideration, and continued to perform its arduous and fatiguing duties solely from a strong and noble wish to be useful to Ireland without any reference to his own advantage. The marriage took place on the 19th November 1835. They were married from Weston House, Warwickshire, the seat of Sir George Philips, where they first became acquainted in the autumn of 1833. After a short tour, Mr Drummond returned with his wife to the Under Secretary's delightful lodge in the Phœnix Park, which thenceforth, to the end, was to be his home. His letters to his "beloved mother," in the period preceding his marriage, are full of tenderness. The deep and sacred wells of feeling are, if ever, opened on such occasions.

The rest of this Memoir consists chiefly of a record of Mr Drummond's exertions on behalf of Ireland.

CHAPTER XIII.

A REVIEW OF IRISH HISTORY.

To any account of the state of Ireland in modern times, a review of the history of the island is an essential introduction, inasmuch as the modern history is very intimately connected with the ancient, and cannot be understood apart from it. Accordingly, it is proper that such a review should here be attempted. The state of affairs in that country in 1835 should be set, as clearly as possible, in the light of the causes which produced it, to give the reader a chance of sympathising with Mr Drummond in his enthusiasm for Ireland and exertions on her behalf.

There are in Ireland, as it were, two nations interfused, yet distinct, with separate traditions, and differing in blood, temperament, and religion. The larger represents the tribes which occupied the country before the conquest; the smaller represents the conquerors. Their relations have been always hostile. The growth of the society which they compose has, consequently, been abnormal; its growing pains acute and prolonged beyond parallel. They have not yet ceased; they are constantly inducing popular feverishness and delirium. Ireland, let us trust, will be happy yet. But there have been times when her case has appeared to resemble

those terrible cases of which physiologists treat, in which, one body growing, or trying to grow within another, both are destined to die at a certain stage of their development.

The history of Ireland is mainly that of the larger of the two nations—the nation of the tribes. In the time of Henry the Second this consisted, according to the computation of Sir William Petty, of not more than 300,000 souls, divided into a few tribes, and sub-divided into a great number of clans or septs. The Scots, long the dominant tribe, had, some centuries before, transferred themselves from Ireland to North Britain. The Firbolgs, Milesians, Picts, Tuatha de Danaans, and Caledonians, whom they left behind, were, by the time of the conquest, much interfused, and to be found in each of the five kingdoms into which the country was divided. The interfusion, however, had not been carried to that point where it induces national unity. Indeed, the population was far from approaching a state of political maturity. One of the five kings was styled the King of Ireland, but he was king in little more than name. The provincial kings, again, had no real sovereignty. They were the chiefs of the greater tribes; and within the tribes the chiefs of the greater clans recognised no paramount authority. The tribal bond was almost as loose as the national. In the population there were Scandinavian elements, but it was mainly Keltic.

The number of clans was prodigious. In Tir Eogain (Tyrone), which comprised the counties of Tyrone, Derry, and part of Donegal, there were thirty-four clans; in Tir Conaill (the rest of Donegal), there were twenty. In Cavan and Leitrim there were thirty-three; in Fermanagh, fourteen; in North Connaught, includ-

ing Sligo and Mayo, there were fifty; in South Connaught, including Roscommon and Galway, there were fifty-four. There were twenty-two in Dublin and Kildare; thirty-three in King's and Queen's counties; in Cork and Kerry, thirty-four; and forty-four in Waterford and Tipperary. They lay in like numbers over the rest of Ireland. Among the Munster Milesians there were forty-nine clans of Dalcassians, twenty of Eugenians, eight of the clan Kian (a tribal name), about ten of each of the Ithians and Degadians, and twelve of the Irians. Those enumerated were the *chief* clans in their respective districts; there were many others too insignificant to be counted. The division of the people into so many groups, asserting a high degree of independence, must long have prevented their becoming, politically speaking, a nation. Moreover, the obstacles to political union, which are commonly found existing in populations so divided, were unusually strong, owing to the Keltic temperament and love of fighting. The clan feuds were incessant; the tribal wars were almost incessant. Antipathies, founded on wrongs real or imaginary, divided the clans; antipathies, founded on real or assumed differences of race, divided the tribes. There were everywhere hereditary hatreds of unknown origin. The clans even contained within themselves the elements of discord, and fell into factions. It is probable that the modern faction-fights, the feuds which separate the inhabitants of adjoining hamlets, and which in some towns divide even the inhabitants of adjoining streets, though of the same religion, are the remains of those ancient antipathies, whose origin was probably no better understood at the time of the conquest than in the nineteenth century. Aytoun's humorous account of the cause of Mhic-Mac-Methusalch's anti-

pathy to the Fairshon is full of historical significance, if we throw out of view the wonderful age of the patriarch,—

> "You are a plackguard, sir,
> It is now six hundred
> Coot long years and more
> Since my glen was plundered."

Abductions and raids for cattle-lifting were no doubt the chief sources of tribal animosities.

The other social forms were as immature as the political. Property was held in common; the succession of sons to fathers had not been introduced. The tribes had been resolved into clans of different stocks; but the clans had not yet, properly speaking, been resolved into families. The tie of milk was superior to the tie of blood; children belonged rather to the sept than to the family. They were rarely or never reared by their own mothers,—"the potent men *selling*," says Sir John Davis, "the meaner sort *buying* the alterage of their children." These and other customs of the Irish demonstrated a stage of advancement not unlike that of the New Zealanders of our own time. It is true that (though in some districts the primitive pagan religion survived) the Irish had now for some centuries been Christians. That fact, however, has little bearing on the phase of civilisation through which they were passing. Christianity had been run into such social moulds as there were to receive it, pagan superstitions mixing with the doctrines of the Church, and the sept system determining its organisation. It was only on the family system that it could have acted quickly as a transforming power; it did not act quickly on that, so inveterate were the popular habits of lewdness and

licentiousness: on the other hand, it rather favoured the perpetuation of the systems of property and succession.*

The law of succession was a powerful obstacle to political progress. The sept had always a chief, and a tanist, who was to be the chief's successor. When a chief died the tanist became chief, and a new tanist was elected. Any male of full age, belonging to the leading family group, was eligible for the office. The brother of the chief, or the male next to him in age of the same family, was usually chosen; but frequently the appointment was the occasion of a contest, in which success lay with the most cunning and high-handed. These contests frequently led to feuds, and divided the sept into hostile factions. The law which gave the septmen the power of election was tanistry; the same law regulated the succession to the headship in all the groups, and even to the kingship. It is needless to say that it favoured social disintegration. It divided the sept; it divided the tribe; and it rent the kingdom. The law of property, on the other hand, was a powerful obstacle to industry, and, in particular, to agricultural improvement. The septs were the only landowners: the sept-lands were enjoyed according to the law of gavel-kind, which rendered all the land tenures uncertain. By this law the common was divisible among the family groups, on the principle of relative equality; practically the stronger got the larger shares. When

* In Sir John Davis' time (1613), the Irish were politically less advanced than, and socially not much advanced beyond, the stage in which they were seen by Giraldus Cambrensis. Ultimately, however, their religion improved their morals. While the Welsh still exhibit much of the ancient impurity, the Irish—thanks to the priesthood—are now perhaps the purest people in the world.

death threw lands vacant, the chief, as trustee for the sept, assumed the whole lands, and redivided them—a partition called a gavel. Had the arts of agriculture been known, they could not have been exercised to any great extent under a system which, constantly changing the occupancy of lands, rendered it uncertain whether the labourer would enjoy the fruits of his labour. The consequence was that the people were mainly shepherds or herdsmen.

With such customs and laws, the Irish were in the rear of most of the peoples of Europe. No doubt, in some parts of France and Germany, in Finland, Sweden, and Norway, races were to be found quite as low. But the majority of the European races were almost as far a-head of the Irish, as the Irish of to-day are of the Maoris. The forms which make the real distinctions between nations are organic, hidden as it were under the surface. And European Society generally rested on a framework of a higher type than the Irish,—a superior family and political system, with superior laws of property and succession. Superficially viewed, the races of the Continent may have appeared quite as barbaric; they may have been more lawless and turbulent. Moreover, as these races were mostly pagan, it is easy to understand how, in the sixth and seventh centuries, the Irish, burning with the zeal of recent conversion to Christianity, and possessing some schools of Christian learning, might appear to be in advance of them. Missionaries from Ireland were carrying the new light into the dark places in which paganism was still enshrined. Her music and poetry—products of Keltic genius—were celebrated. Her sons were distinguished by wit as by piety. All these were distinctions bespeaking a species of superiority. Yet might they have all of them been

presented by a nation of even still lower organisation. The really distinctive marks of inferiority remained; common property, the gavel, tanistry, an imperfect system of kinship. Most of the Europeans had left these behind. Even the Kelts of Britain had got rid of them under their Roman masters, and were separated by a gulf from their congeners of Ireland. At the time of the Roman conquest they were probably lower in the scale. Cæsar found among them customs which throw light on the Irish institutions. But it was their good fortune, for four hundred years, to be under the influence of the most advanced civilisation the world then knew. To this day the Irish have not received an equivalent training. They were long left to work out their own advancement; and, unfortunately for them, Christianity, which for a moment seemed to make them superior to their pagan neighbours, from incidents attending its introduction, did much to stereotype their laws and customs, and to render a spontaneous onward movement next to impossible.

The Brehon or ancient Irish laws had been reduced to a written code, under the immediate authority of St Patrick, or of one or other of the persons who have been rolled up into the saint. They included gavel-kind, tanistry, and the law of the Eric or money compensations for murder. And such was the veneration of the Irish for the instrument of their conversion to Christianity, that they reverenced the code as much as the religion. Patrick's Law, as they loved to call it, was declared to be unalterable; and with that code no people could advance beyond a state of comparative savageness.

Such was the social and political state of the Irish when their relations with England commenced. The

septmen—rude herdsmen, probably not long settled from nomad life—are represented as living, on the whole, in a miserable condition, borne down by the exactions of their chiefs and kings—"cuttings and cosheries" and "coyne and livery." Beneath them were the Betaghs or slaves, in a condition still more wretched. Above them were the chiefs, exercising lavish hospitalities at the expense of their inferiors; constantly intriguing against and quarrelling with one another. In the palaces of the greater chiefs was maintained no small degree of luxury, and even of barbaric splendour. To these the septmen, at times, repaired to be amused by wandering genealogists, with recently invented fables, setting forth the splendid antiquity of their race, or by wandering minstrels singing to them songs of love or war, or the foray; and at other times, most probably, for justice at the hands of their Brehons or native judges.

The Irish were then, as they have often since proved, their own worst enemies. There were other enemies, however, with whom they had to contend. They might live peaceably, if they would, in the midland, and on the coast to the north and west. But on the south and east were points of terror and danger. These were the towns—almost the only places in Ireland worthy of the name—all in possession of the Danes.

The Danes had now been firmly planted for upwards of three hundred years on the land. Had the tribes united, they might have swept the scourges of God into the sea, as afterwards they often might have swept the Anglo-Normans. But they were not united, nor capable of union for more than a moment and a single success. So the scourges remained, finding the coast towns convenient ports of departure on their predatory excursions by sea, and

safe retreats from the tribesmen on occasions of despoiling them. Resistance to the same invaders had in England established the monarchy. In Ireland, no political benefit had accrued, as a set-off to the centuries of suffering. At the end of the Danish period, as at its commencement, there was still the pentarchy, and in the separate kingdoms the same low order of political organisation. On the other hand, the presence of the Danes checked the course of social improvement. Indeed, if those writers are correct who take such high ground, as to Irish civilisation in the sixth and seventh centuries, we must hold the Danes to have been a cause of social retrogression. The presence of such an enemy, it can be believed, may have had such an effect.

It is important that the primitive state of the Irish should be understood, because it was preserved almost unchanged till near the beginning, and, in some parts, even till near the end, of the seventeenth century. In the long interval between the landing of the Anglo-Normans and the final suppression, by James I., of the Brehon law, no organic improvement whatever had taken place. The sept system was still in force, with gavel-kind and tanistry, and all the other impediments which it presented to progress. The political system, such as it was, had crumbled beneath intestine feuds and the pressure of the English enemy: instead of the five provinces of the earlier time, there were ninety "regions" in Ireland—beyond the Pale—under absolutely independent chiefs. If, then, the nation of the tribes has been trained to respect the settled order of government, or laws and institutions of a type higher than its own, this has been effected within comparatively recent times. What the education was which

the Irish received in the earlier and in later times we shall see hereafter.

The Anglo-Normans made their first appearance in Ireland as private adventurers with no title but the sword. Three parties in succession descended on the coast to slay the Irish and Danes alike, and occupy their towns and lands, before the movement was adopted by the King and the character of absolute and confessed lawlessness taken from the expeditions. The earlier adventurers had been prompted to the attack by a native prince, whom a scandalous abduction had embroiled with his countrymen. When Henry II. appeared in Ireland in the year 1172, it was under the authority of the Pope of Rome, the infallible head of the Mother Church of Irishmen.

The primitive Irish Church was Christian, but not Roman Catholic. Though, in 1152, a synod of its clergy acknowledged the See of Rome, no Peter's pence seem to have been paid, and Rome was dissatisfied. In 1154 Pope Adrian IV., as "king of all islands," by a bull granted the lordship of Ireland to Henry, for the express purpose of "broadening the borders of the Church." As his authority had two years previously been acknowledged in Ireland, his simple object would appear to have been to fill the Church coffers. The interests of Rome jumped with the ambition of the Normans. It was decent, however, that greed and rapine should cloak themselves with an ostensibly noble purpose, and none could be more excellent than the extension of the Faith. Let the Irish take what comfort they can from the fact that the conquest, and its train of evils, had such an origin. If there was a hidden cause, it lay among the motives to the scheme of conquest projected a century earlier, between Hildebrand,

and William the Conqueror; a scheme in which the conquest of Saxon England was to be the prelude to the subjugation, in their turn, of Ireland and Scotland. The hated Saxons had nothing to do with the projection of the scheme. They were its first victims; and if their fall was less calamitous than that of the Irish, it was because they had become, and could fall as, a nation, and were sufficiently advanced readily to blend with, and finally to absorb their conquerors.

Had the Irish been politically united, they must have conquered and expelled the invaders, or been themselves, after a death struggle, finally and quickly vanquished. A monarchy resembles an animal of high organisation. As this may be slain by a single stroke, so that may be overthrown by a single victory. The battle of Hastings gave the supremacy in England to the Normans. A confederation of tribes and clans resembles a creature of low organisation, which being cut in pieces, is rather multiplied than destroyed. When the life-centres are numerous and independent, there can be no killing except through the destruction of the parts. England went down at a blow. Scotland, full of great and independent tribes, again and again repelled, or rather survived, the efforts to conquer it. Every great house was a centre of the popular resistance. Defeated at one point, the people rallied at another; and the process of destruction in detail was too costly and tedious to be persisted in.

No conquest of Ireland could be other than delusive that was not an overthrow of the septs. Society as it stood required to be taken up by the roots and replanted. Whether it would have survived the process may be a question; but if the thing was to be done swiftly and by force, that was the way to do it. To

have slain the whole population, would have been a course infinitely more merciful than that into which the invaders drifted.*

Begun by adventurers, the conquest was, after a brief season, practically left to be carried on by them. The new Lord of Ireland, by the grace of the Pope, after receiving lip homage from a number of native chiefs, executed some Church business in return for the grant he had received, and in a few months left the country to the barons who had preceded, accompanied, or followed him. The conquest was nominal beyond the area which they garrisoned. From the chief province of Ireland even a nominal submission had not been received. There was no pretence made of treating the districts which had submitted as parts or even as dependencies of the empire. Submission brought none of the rights of subjugation; it brought neither the laws, government, nor protection of the conquerors. It brought no obligations. It brought, however, evils which are rarely its concomitants. It gave the barons a *locus standi* in the country for the purpose of plunder. The Crown depended on the barons for maintaining an appearance of such dominion as it claimed in Ireland, and the only ends which the barons had in view would have been defeated, had the Crown recognised the natives as their fellow-subjects. So the barons had their way. And they just treated the Christian Irish in the twelth century as our Colonists are treating the pagan Maoris in the nineteenth.† The plan of the conquest

* More than double the number of souls on the island at the date of Henry's invasion, perished by the sword and famine in the war following the rebellion of 1641; and that has been by no means Ireland's most tragic period.

† How close the parallel is, the reader will see if he takes the trouble to read a paper in "Good Words" for 1866, p. 696, by "An

may have been limited, perhaps undefined. Whatever it was, the strength of England was not free to be applied to its execution. And the drift set in—the drift of events which has led to modern Ireland.

The four centuries which followed were centuries of constant feud and slaughter between the invaded and the invaders, of wrongs and retaliations ever increasing with the lapse of time. They were centuries in which the Anglo-Irish and the Irish were both being brutalised by their conflicts—in which, at least, they were receiving the worst possible training for future peaceable cohabitation. The peoples were in effect all the time enemies, living under different laws and governments. The law of England was "by law" established within the Pale; practically there was no law but the will of the stronger. There were at one time within it nine Counties Palatine —unmitigated despotisms. Beyond these, the rule of a rude aristocracy, unrestrained by the presence of sovereignty, was a virtual anarchy. Outside the Pale were the tribes—their laws, language, and customs all unchanged. There was one main source of the never-ending conflict between the races, namely the land, which the barons were there to take and the Irish to defend. When the barons were united, they held what they took; when they fell out, the septmen regained their own. And the area of the Pale was always broadening or contracting. Sept and tribal wars—wars with the barons—baronial wars, in which the septs took sides—were the stock incidents of the miserable drama. On an

Army Chaplain," on our proceedings in New Zealand. It is the Irish conquest over again, but will terminate, I hope, more satisfactorily. The chaplain is looking forward to the rapid extinction of the natives! How often did the English long for the extinction of the Irish?

unusual parade of English power, the chiefs hurried to do homage—lip submission, over with the danger which evoked it.

The conflict of the laws was, perhaps, as productive of bad blood as the conflict for the land; at least the native historians have made rather more use of it to keep alive the Irish hatred of England. A septman who slew an Englishman was, by native law, liable only in the Eric—a money payment to the relatives of the slain. By the English, however, if they caught him, he was hanged, in defiance of the Cain Patric. By English law, on the other hand, to kill an Irishman was no murder. He was an outlaw and enemy of the Crown. To break a contract with him was no wrong; he could not sue in the English courts. The slaughter of the Irish and seizure of their property were acts rewarded by the Government. They helped to give the substance where there was little beyond the name of dominion. So the Irish were plundered and massacred at will, subject only to the restraints imposed by the fear of retaliation. Five of the septs, more fortunate than their neighbours, were treated differently, being allowed the benefit of the English law. A common defence in charges of murder was that the murdered man was of "the mere Irish," and not of the *quinque sanguines*—the five favoured bloods. It might be imagined that the septmen in love with the Cain Patric were beyond the law because they chose not to come within it. This was not the case. To get rid of the disadvantages of their position, they repeatedly petitioned for admission to the benefits of English law, and were always refused. The petitions, indeed, were uniformly treated with contempt. To have granted them would have been to abandon the privilege of oppression. Even

the Irish within the Pale were not yet within the law. They were the subjects of special enactments which practically excluded them from its protection. By a statute dated 1465, for example, any one might kill "any person GOING TO rob or steal, *having no faithful man of good name or fame in his company in English apparel.*" This, of course, exposed every Irishman to be killed at the discretion of any Englishman. It should be stated, however, that by the next Act of the same Parliament, the septmen of the Pale were directed to take English names, and to wear English apparel.*

The privilege of oppression belonged to the King's Irish subjects—the barons of the Pale; the victims of the privilege were the King's Irish enemies—the people of Ireland. After a time there grew up a third class—the King's Irish rebels; adventurers who took to the wild life of the Irish, as in Australia some English take to the bush; or the barons in outlying districts, who, forming ties with the natives, or being charmed by their mode of life, dropped the Norman style and set up as Irish chiefs. The renegades became, in mere outward respects, more Irish than the Irish. Had the growing influence of Irish habits and customs been allowed to extend itself, the races, in process of time, might have become naturally mixed. The infusion of Norman and Saxon blood would have gradually rendered the population similar to the British. The mixed population might at a later time have gone more securely through the organic changes. They would gradually, through the influence of the ideas brought in by the English, have been trained in the relations of landlord and tenant, and prepared for the reception as a national system of

* "Statutes established in a Parliament holden at Trym," chap. ii. and iii.

the feudal land-tenures and laws of succession. This, however, was not to be. The growing tendency towards amalgamation was checked by the Statutes of Kilkenny, passed in 1367. It is difficult to believe that these statutes were not dictated more by antipathy than policy. They were certainly as impolitic as they were malicious. To intermarry with the Irish, to form any connection with them in the way of fostering or of "gossipred," to adopt or submit to the Brehon laws, were declared to be acts of high treason, and to be punishable as such.* On the other hand, it was made penal to present an Irishman to an ecclesiastical benefice, or to entertain an Irish bard, minstrel, or story-teller. In short, intercourse with the natives was for ever interdicted, and perpetual war declared, not only against them, but against every one of English blood who, having settled beyond the Pale, had formed connections with them or adopted their customs.

The effect of these statutes was to draw together the Irish rebels and the Irish enemies. The area of conquered land, which, constantly changing in extent, had at one time covered more than five counties, was very soon reduced to a single county. By the time of Henry IV., after two centuries of the conflict, there was little left to the English except the county of Dublin. In the time of Edward IV., the Pale was at such an ebb that its defenders consisted of only eighty archers on horseback and forty spearmen! By the time of Henry VII., it was verging on extinction. From a report made in the reign of Henry VIII., it appears that "the English order, tongue, and habit" were used, and the English laws obeyed, within a district of not more

* A statute of Kilkenny is said to be now in force in New Zealand. Marriage with the natives is criminal, but concubinage is permitted.

than twenty miles in compass; sixty "regions" of Ireland were under the dominion of Irish chieftains; and thirty "regions" under the authority of chiefs of Anglo-Norman descent—the Irish rebels—who acknowledged neither the laws nor the government of England. In the mean time, the relations between the septs and the barons of the Pale had come to a great extent to be reversed; and the barons on the borders, who did not lose their lands, paid tribute to the native chiefs for protection. It seems as if the existence of the Pale must have often depended on the native contempt for it. Perhaps a wholesome dread of England's power, which had more than once been paraded in Ireland—a first time by Henry II., and twice afterwards by Richard II. —restrained the septs from the attempt; but it is obvious that had there been anything like national spirit in Ireland, the Irish could easily have cleared the country, at least for a time, of all who did not fall in with their own ways. There was, however, no Irish nation, and as yet no push for the mastery of the country had been made by the English. The real struggle came later. When it came, it was a war for the overthrow of the septs; which, beginning under Henry VIII., after long wavering ended with the fall of Tyrone, in the time of Elizabeth, leaving Ireland a waste of blood and ashes.

The event which precipitated the struggle was undoubtedly the Reformation. Henry VIII., having finally quarrelled with Rome, assumed the title of King of Ireland; the English kings had previously been mere lords of Ireland under the authority of the Popes. The conquest, begun in a communion of the interests of Rome and England, was now to be consummated through their opposition. Both were to retain a hold

on the common prey—this to win the political, and that the spiritual allegiance; this the kingdom, and that the people. The struggle, had it come earlier, would have been for the land merely. Coming when and as it did, it was not only a war of races, but of religions. The Irish hatred of England, says an eloquent writer, was before an instinct; it was now to become a passion.

From the first there was a religious difference, but strictly it was rather a difference of Church-adherence than of religion. The Irish Church had early acknowledged the See of Rome. It had peculiarities of organisation and discipline, however, and continued to be a separate and independent Church. With the Church of the Pale, in which the ecclesiastical order of England was established, it had absolutely no connection. They were both Christian—they were both Catholic; the difference was that the English was a Romish Church, and the Irish was not, save by remote acknowledgment. It was independent.

By the course of events which followed the Reformation the relations of the Churches came to be reversed. The Church of the Pale became Protestant—separate from Rome; the Church of the Irish became Roman Catholic, and the most zealous and devoted of the Romish Churches. Rome, become the natural ally of the Irish, bent her energies to win them, and succeeded. The power of England, under Henry and Elizabeth, was so exerted against the Irish that they welcomed countenance from any quarter. To the chiefs the change may have been a policy; to the septmen an act of fealty: at any rate it was thorough. A Papal Church was quickly organised. Its organisation was as quickly braced by manifold persecutions.

The Reformation, as Henry VIII. understood it, consisted mainly in the assumption by himself of the Pope's place, rights, and powers in England and its dependencies. The same armies which compelled the Irish generally to acknowledge his temporal authority secured their admission of his spiritual supremacy. He pushed Protestantism no further than this in Ireland, save to make profit out of it by suppressing the religious houses and confiscating their property. In the next reign, the people had to choose between martyrdom and Protestantism in the more alarming shape of a reformed liturgy. The reign of "Bloody Mary" gave the Irish a short respite; *their* "bloody" Queen was the good Queen Bess. Her root-and-branch policy, which ruined the septs, sprung quite as much from religious as political considerations. Behind her generals, as they proceeded crushing the people, went her propagandists, converting the survivors by the best short and easy methods known to her times. One of her first acts in Ireland was the expulsion from their cures of all the priests who declined to become Protestant—a wholesale measure which rendered the native Church henceforth the chief organ of opposition to English supremacy.

The love of plunder had now found a powerful auxiliary in zeal for the reformed religion, and Ireland was doomed to be at once Protestantised and parcelled out to Englishmen. The time had come when the extermination or removal of the native race was, in many quarters, openly avowed and longed for. At any rate, it was agreed that vigorous measures should be taken against the contumacious savages. The root-and-branch policy was entered upon. The details of its progress are unimportant; its objects are as clear as its results have been lamentable.

Leinster had been overrun by Henry VIII. It swarmed, at the date of Elizabeth's accession, with landless, homeless septmen, leading in the wilds and woods a life of wretchedness and desperation. Connaught had been overrun and devastated in the same reign. It was now the scene of a destructive war between rival branches of the ruling tribe. Munster was distracted by a similar struggle for provincial supremacy; while in Ulster the powerful Tyrone was at once a sovereign and a rebel.

Munster was fated to be first struck by Elizabeth. The blow was most efficacious, and the power of the chiefs in this province was gone for ever. The English army acted indeed as if its mission were not to conquer, but to destroy the people. Its route was everywhere marked by slaughter, famine, and desolation. "The soldiers in the camp," says an English chronicler, "were so hot upon the spur and so eager upon the vile rebels, that they spared neither man, woman, nor child, but *all* were committed to the sword." The natives, when they crowded into castles, were burnt or slain in the mass. Their cattle were carried off, and their crops cut down; and those whom the sword spared hunger destroyed. Famine led to cannibalism; children devoured their parents—parents their children; the bodies even of the buried were taken up and eaten at the open graves. Spenser has left a painful commemorative picture of the desolation. "Notwithstanding," he says, "that the same was a most rich and plentifull countrey, . . . yet, ere one yeare and a halfe, they were brought to such wretchednesse as that any stony heart would have rued the same. Out of every corner of the woods and glynnes they came creeping forth upon their hands, for their legges could not beare them; they looked like

anatomies of death; they spake like ghosts crying out of their graves; they did eate the dead carrions, happy where they could finde them, yea, and one another soone after, insomuch as the very carcasses they spared not to scrape out of their graves; and if they found a plot of water-cresses or shamrocks, there they flocked as to a feast for the time, yet not able to continue therewithall; that in short space there was none almost left, and a most populous and plentifull countrey sudainely left voyde of man and beast." The poet found his profit in these miseries, and his heart seems not to have been wholly melted by their contemplation. Some Irish were still left in Munster, and while any survived there could be no *Hibernia pacata*. As ingenious as graceful, he proposed a short and easy method for despatching them altogether; a period of grace, in which they might make final submission—after which, should they not submit, such restraints as that they must die of starvation. "The end will (I assure me), be very short and much sooner than it can be in so great a trouble, as it seemeth, hoped for: although there should be none of them fall by the sword nor be slain by the souldiour, yet thus being kept from manurance, and their cattle from running abroad, they would quickly consume themselves and devoure one another."

The turn of Ulster came next, and there again the policy of devastation which had so thoroughly *pacified* Munster was pursued. The country was laid waste, the cattle and crops, and even the houses destroyed; and every man, woman, and child, that could be caught, was slaughtered. Those who escaped the sword were left to die of starvation. With the famine again came cannibalism and its revolting incidents. "No spectacle," says one writer, "was more frequent in the ditches of

the towns, and especially in the wasted countries, than to see multitudes of the poor people dead, with their mouths all coloured green by eating nettles, docks, and all things they could rend above ground." These results were not brought about without resistance. Tyrone of Ulster was a more formidable enemy than Desmond of Munster. The issues of the struggle also were now better defined than when Munster was attacked. The priests were everywhere active urging the septs to lay aside their feuds, and make common cause against the enemies of their faith and country. And the septs united in a way that was unprecedented. Spain—the sword of the Papacy—came, though feebly, to their assistance. The English were repeatedly defeated; their dominion in the island almost lost. In the end of the day the result was not absolute humiliation for the Irish, but a treaty and a compromise. The free and open exercise of their religion was conceded to them, and the full enjoyment of their estates. The tribal ties of Ulster were, however, shattered. The leading condition of the peace was, that Tyrone should renounce his name and sovereignty as chief.

The nation of the tribes here reached a turning point in its history. Up to this time the Irish had got on somehow with the sept and tribal organisation, the revered Patrick's law, tanistry, gavel-kind, and the Eric. They were now to be introduced to shire lands and county magistrates; to *a me* and *de me* holdings; leasehold, copyhold, and freehold; landlord and tenant, primogeniture, and the scaffold. An immense step for a people to take at once! Had England possessed a high-souled intellectual statesmanship, this was the occasion for displaying it. She had assumed, for better or worse, as partner in her history, a people docile, loyal to their

leaders, respecting even to veneration their own laws and customs. She had disjointed the old framework of their society, and the problem was before her how to reorganise and govern it. What the solution of the problem should have been need not be speculated upon. It is very obvious now that no solution could be other than a failure, which did not present to the stricken people some appearance of wisdom, justice, and mercy.

The reorganisation took place under James I. The Irish laws were declared to be for ever abolished; the English laws were substituted for them. The country was divided into counties, and the counties placed under magistrates. All this was well. Unhappily, the first taste which the Irish got of the law—the privileges of which had been so often petitioned for and refused—was very bitter. It took the practical form of wholesale confiscations. Two millions eight hundred thousand acres, between one-third and one-fourth of the whole land, and between one-half and one-third of the good land, were confiscated. The sept chiefs were sent "to Connaught or the devil." Many left the country; many went to Connaught. The chiefs whose lands were not forfeited found themselves turned from chiefs into landowners—a change to them not unwelcome; the septmen found themselves turned from joint owners of the soil into tenants at will, with, in many cases, landlords hateful to them by a thousand memories—aliens in race, language, and religion. In many districts chiefs and septmen alike were cleared off the land to make way for the foreign settlers. The evicted multitudes—sent neither to Connaught nor the devil—wandered about homeless, starving, and desperate. Many of them died; many betook themselves to a lawless life in the woods and mountains. A new organisa-

tion was what Irish society required. This reorganisation beggared one section of the people and enslaved the other. As a solution of the Irish problem, it was neither wise, just, nor merciful.

The races whom Kilkenny statutes had previously prevented from intermixing, and between whom spoliation had erected a barrier, were now farther and for ever separated by the difference of religion. The English had after a fashion spontaneously become Protestant. The Pale in Ireland was made Protestant by compulsion; the Irish, by the effort to change their religion, were made—what before they had not been—Roman Catholic. In both countries, after the Reformation, penal laws laid their pressure on the recusants. The pressure was at once felt by those lords of the Pale who clung to the old faith; the mass of the Irish were at first beyond its reach. The vigorous policy, whose results we have just seen, soon, however, conveyed to the Irish a well-defined idea of Protestantism and its pressures. Those whom Elizabeth's generals spared, were dealt with by her propagandists. The means of conversion cannot be called peculiar, though some of the tortures were, perhaps, less refined than usual. The Catholic priests were forbidden to exercise their spiritual functions, and were hanged, burned, and so on, if they did. So far, all was right, proper, and customary! It was improper, however, to beat their brains out with stones, although to rip open their stomachs and burn their bowels before their faces may have been permissible. The Irish may be excused if they made the most of the fine distinction. To further their conversion, a swarm of profligate parsons—the refuse of the Church of England—were established in the cures from which the priests were evicted. Whether they were so black as they have

been painted, it is needless to inquire very particularly. Ignorant of the language of the natives, they could not represent for them the Good Shepherd. The Pope's success cannot be wondered at. The people clung to the ancient faith and the native pastors, and identified Protestantism with all that was odious and intolerable.

One of the first acts of James I. was a gaol delivery, from which he excluded "murderers and Papists." The free exercise of their religion, conceded by Elizabeth in treaty to the Irish, had never been granted in fact. King James found the Catholic chapels shut; he kept them shut, and enforced attendance in the Protestant churches by fine and imprisonment. It had been rumoured that he was going to be tolerant. Such a suspicion was too horrible to be borne. He threw it off by royal proclamation, for behoof of all whom it might concern:—"Whereas his Majesty is informed that his subjects of Ireland have been deceived by a false report that his Majesty had been disposed to allow them liberty of conscience and free choice of a religion; he hereby intimates to his beloved subjects of Ireland, that he will NOT admit of any such liberty of conscience as they were made to expect by such report." The ecclesiastical courts in his reign exercised the functions and powers of the inquisition. Religion was made a ground for robbing the natives of the land—to "throw it into the Protestant interest." At a sweep six great counties in Ulster were thrown into this interest, the *Irish* prohibited *from living in them,* and such Roman Catholics as were not Irish prevented by the oath of supremacy being made a condition of residence. In the next reign the Catholics were still more aggrieved under the unscrupulous Strafford. A part of Connaught was confiscated, and it was mooted that the whole was to be "thrown

into the Protestant interest." The Puritans, now become a power, talked of Catholic extermination—"the conversion of the Papists with the Bible in the one hand and the sword in the other." The Catholics of the Pale as well as the native Catholics were filled with dismay. Disaffection and terror sprang up together, and the country ripened for revolt. The example of the Scots in rebellion against Laud and Episcopacy was not thrown away on the Irish. Their exiles flocked home. Expatriated chiefs appeared once more rallying the clansmen. The septmen of Ulster, driven from their lands to live like savages in the mountains, were eager to try their chance. The Connaughtmen, with the fate of Ulster before them, were also eager. On the 23d October 1641, the insurrection broke out, and for eleven years Ireland became one great battle-field and scene of slaughter. At a blow a vast multitude of the new Protestant settlers of Ulster were slain; by the return blow, the Catholic natives in several districts, an untold multitude, were swept off the face of the earth. The sudden deluge of blood was followed by an eruption of fiery hate. No intriguing Jesuits needed henceforth to fan the flames. They still burn briskly, and seem to be inextinguishable.

Most efficiently did "religion" now perform its (always best performed) function of setting men at each other's throats. The traditions of the Pale in effect made two Catholic interests—the Catholics of the Pale and the native Irish. Protestantism, as was natural, had fallen into varieties, most of which were now represented in Ireland. The Catholic natives, the Catholics of the Pale, the Protestant Royalists, and the Parliamentarians—splitting into Presbyterians and Independents—were plotting, counterplotting, intriguing, conspiring, and

fighting with one another. Other interests, no doubt, were moving the actors, but it appeared as if religion, which had never prevented, was now the most active promoter of violence and discord.

It is unnecessary to trace with any minuteness the history of these miserable years. Two political principles and three religions, at the least, were appealing simultaneously to brute force for an adjustment of their relations. Behind all was the question of the land. There were five interests and as many armies. There were the armies of the Royalists, of the Anglo-Irish Catholics, of the Irish Catholics, of the Parliamentarians, and of the Scotch Covenanters. The Scotch army sided with the Parliamentarians; the Irish rebel army was against both the King and the Parliament; the Anglo-Irish army was now used this way and now that, its leaders playing fast and loose between the Royalists and the Irish rebels; the Irish Royalists, the open enemies of the Parliamentarians, were playing fast and loose between Protestantism and Catholicism—between the Anglo-Irish Catholics and the English Protestant Royalists. No land has ever been the scene of so much bad principle, impolicy, and bootless devastation. Across the Channel, the confusion had, to some extent, its counterpart, out of which, however, came results at last, and Cromwell, armed with the power of England, prayerfully hastening to his work. Sharp and bloody work it was, and fruitful to the Irish of bitter memories. First came wholesale butcheries, *mercifully* executed in cold blood; next there came wholesale confiscations and a settlement, aggravating every evil feature in the previous settlement of Ireland. Cromwell ended the confusion, which had seemed hopeless and unending; but "there is that scattereth, and yet increaseth."

The confusion, after all, was the smaller matter. The settlement of Ireland involved the happiness in all time of a people.

In 1641 the population of Ireland, according to Sir William Petty, was 1,466,000, of whom 616,000 were destroyed in the eleven years of the war. He computes that there perished or disappeared in these years, "by the sword, famine, hardship, and banishment," no fewer than 504,000 of the native Irish, being nearly twice as many as were altogether in 1172. Figures, however, convey but a poor notion of the state to which the country was reduced. Famine, as at the end of the Elizabethan wars, stepped in to complete the havoc of the sword. A plague followed. Suicide became epidemic, as the only escape from the intolerable evils of life. Cannibalism reappeared. According to an eye-witness, whole counties were cleared of their inhabitants. "A man might travel twenty or thirty miles and not see a living creature, either man, beast, or bird." Where survivors were found they were either old men and women or children. "I have seen these miserable creatures," says Colonel Lawrence, "plucking stinking carrion out of a ditch, black and rotten, and been credibly informed that they digged corpses out of the grave to eat." Many pitied; many reflected. The reflection which occupied some minds was, that "a few more rebellions," could they be stirred up, would see the last of the wretched race. A curse seemed to rest on them, and they were becoming a curse to their conquerors. "Some furious spirits," says Sir William Petty, writing in 1672, "have wished that the Irish would rebel again, that they might be put to the sword. But I declare that motion to be not only impious and inhuman, but withal frivolous and pernicious even to them who

have rashly wished for those occasions." Our modern colonists, with their after-harvest "battues for clearing off the natives," conducted at once as work and a pastime, are less scrupulous than was this simple statistician. His remedy for the evils of Ireland was the union of the kingdom with England; the removal of a portion of the Irish, and substitution for them of an equal number of English; the encouragement of intermarriages of Irishmen with Englishwomen, so as to secure an intermixture of the races, with, *ad interim*, a fair religious establishment for the native Catholics. The priests, like the women, were to be English. "So as that when the priests, who govern the conscience, and the women, who influence other powerful appetites, shall be English, both of whom shall be in the bosom of the men, it must be that no massacring of the English, as heretofore, can happen again." Similar projects had been mooted nearly a hundred years before, a dread of coming evil from the ill-used Irish even then appearing in speculations as to their condition and future governance. We may see this in the opening of Spenser's view of the state of Ireland in 1596. "But if that countrey of Ireland," says Eudoxus, "be of so goodly and commodious a soyle, as you report, I wonder that no course is taken for the turning thereof to good uses, and reducing that nation to better government and civility." "Marry, so there have bin divers good plots devised," responds Irenæus, "and wise councels cast already about reformation of that realme, but they say it is the fatall destiny of that land that no purposes whatsoever which are meant for her good will prosper or take good effect, which, whether it proceed from the very genius of the soyle, or influence of the starres, or that Almighty God hath not yet appointed the time for

her reformation, or that he reserveth her in this unquiet state still for some secret scourge which shall by her come unto England, it is hard to be knowne, but yet much to be feared." The same words might be prefixed to an account of the state of Ireland at this day. The country has been repeatedly *settled* since Spenser wrote, but never on a just principle.

The next, and it may be called the final struggle, in which Catholics and Protestants—the natives and the foreigners—appeared at once as religious enemies and rival claimants to the land, was that which took place under James II. and Tyrconnel. It was terminated in favour of the Protestant interest by that "milder Cromwell"—William of Orange. In this struggle, as in Elizabeth's war with Tyrone, the conclusion was not the discomfiture of the Irish, but a compromise and a treaty—the treaty of Limerick, remembered as the record of Irish valour and English perfidy. The treaty was made only to be broken. In disregard of its provisions, the peace inaugurated the reign of Protestant ascendancy and the persecuting code.

Six penal laws against recusants had been in force before the time of William of Orange; by twenty-four acts, passed between the seventh year of his reign and the twenty-ninth of George II., the penal code reached the fulness of its hideousness—the reproach of politicians and disgrace of Protestant Churchmen. It was bad as a punishment of recusancy; as a temptation to conformity it was utterly unprincipled and abominable—a temple of Mammon deliberately erected as ante-chapel to the Holy of Holies.

The Papist was withdrawn from the charge and education of his family; he could educate his children neither at home nor abroad; he could not be their guardian, nor

the guardian of any other person's children. Popish schools were prohibited, and special disabilities attached to Papists bred abroad. A premium was set on the breach of filial duty and the family affections. If a son declared himself Protestant, which he might do in boyhood, a third of his father's fortune was at once applied to his use; the father's estate was secured to him as heir, a life-rent merely being left to the father. A father's settlement to the prejudice of the heir-at-law might be instantly defeated by the heir becoming Protestant. If the heir continued a Papist, the estate *gavelled*—went in equal shares to the sons—a modification of old Irish law introduced to break up the estates of the Papists, so that none should be on the land above the condition of a beggar. If there were no sons, it gavelled on the daughters; if no children, then on the collaterals. Papists who had lost their lands and had grown rich in commerce, could neither buy land nor lend their money on heritable security. The Papist could get no hold, direct or indirect, upon the soil. Even a lease to a Papist, to be legal, must have been short. Any Papist, above sixteen years of age, might be called on to take the oath of abjuration, and, on thrice declining, he suffered a præmunire. If he entertained a priest or a bishop, he was fined; for a third offence he forfeited his whole fortune. The exercise of his religion was forbidden; its chapels were shut up; its priests banished, and hanged if they returned home. An act passed the Irish Parliament, providing that every Roman Catholic priest caught in Ireland should be castrated! A Papist could not enter the profession of the law. He could not marry a Protestant (the fatal Kilkenny provision against mixing, over again). He could neither vote at vestries, nor serve on grand juries, nor act as a constable, as a sheriff,

an under sheriff, or a magistrate. He could neither vote at elections nor sit in Parliament. In short, he was excluded from every office of public trust or emolument. "The Catholics," says Sir H. Parnell, "in place of being the free subjects of a prince from whom they were taught to expect only justice and mercy, were made the slaves of every one, even of the meanest of their Protestant countrymen. Had they become mere slaves, they might have expected some degree of humane treatment; but as the policy which made them slaves held them at the same time as the natural and interested enemies of their masters, they were doomed to experience all the oppression of tyranny without any of the chances, which other slaves enjoy, of the tyrants being merciful and feeling their tyranny secure."

To see how complete was the prostration of the Irish we must look at their relations to the land. The settlements in Ireland had all been rather settlements of "the bill of costs" than of the country. The conquest begun by adventurers was throughout carried on by them, at least in this sense, that either the soldiers were to be paid out of the land, or money was to be thus repaid that had been borrowed for the army as for a commercial adventure. After every victory came a squaring of accounts. They were squared against the land—by just confiscations, if there were grounds for them; if not, then by unjust. Where there were no political excuses for forfeitures, technical excuses were easily invented; the business of discovering these was at one time the lucrative profession of a gang of infamous persons known as *discoverers*. The means by which the confiscations were managed are, perhaps, immaterial, except so far as they have been sources to the Irish of the bitter sense of wrong. The

results are more important. According to the estimate of Sir William Petty, there were in all in Ireland 10,500,000 acres of land, of which 3,000,000 were either unprofitable or covered by rivers, loughs, &c., leaving 7,500,000 of good meadow, arable, and pasture. "Of the whole 7,500,000 acres of good land," says he, "the English and Protestants and the Church have this Christmas (1672), 5,140,000 acres, and the Irish have nearly half as much, viz., 2,280,000." After the Revolution in 1688, 1,060,792 acres, mostly belonging to the Irish, were forfeited and sold *to defray the expense of reducing the rebels*—in short, to settle the bill. The Irish were thus left in possession of little more than one-seventh of the land. This is a favourable way of looking at the figures. How unfavourably they might be, and were regarded by the Irish, may be seen in Lord Clare's celebrated statement in the Irish Parliament in the debate on the Union. "The superficial contents of the island," he said, "are calculated at 11,042,682 acres. The state of the forfeitures was as follows:—

"In the reign of James I., the whole province of Ulster,	2,836,837
Set out by the Court of Claims at the Restoration,	7,800,000
Forfeitures of 1688, ...	1,060,792
Total number of acres forfeited, . .	11,697,629

So that the whole of your island has been confiscated, with the exception of the estates of five or six families of English blood, some of whom had been attainted in the reign of Henry VIII., but who recovered their possessions before Tyrone's rebellion, and escaped the pillage of the republic inflicted by Cromwell; and no inconsiderable portion of the island has been confiscated twice, or perhaps thrice, in the course of a century. If the wars of England carried on here from the reign of

Elizabeth had been waged against a foreign enemy, the inhabitants would have retained their possessions under the established law of civilised nations, and their country have been annexed as a province to the British Empire." "Confiscation is their common title," said Lord Clare, speaking of the landlords, "and from their first settlement they have been hemmed in by the old inhabitants brooding over their discontent in sullen indignation."

The discontent was universal. Even those estates were sources of it which were left in native hands. These owed their existence to a change of law, which altered sept property into family property, without compensating the septmen. It was the stage of Irish development which gave such breadth to the disaffection. Had the ancient land tenures been feudal, the landed class would have been small, and the confiscations would have aggrieved only a few. But every Irishman had an interest in the soil, and was in a sense a landowner. The septs often appeared protesting that the lands could not be forfeited by the chiefs who had never owned them. In one case they made the plea good by force. A colony was planted on lands in Down and Antrim, forfeited in the time of Elizabeth by the attainder of O'Neill. These lands "were presumed in law to be vacant." The colony could not, however, obtain possession, "the native occupants," says Hallam, "not acquiescing in this doctrine of the lawyers." In the reign of Mary the point was again raised by two septs —the O'Mores and O'Connors—and settled by force against them. The plea, however, was never abandoned. To this day the Irish cherish the tradition that they are the true lords of the soil. Their rights were wrested from them by force, and they acknowledge no law of

prescription as making valid titles founded in spoliation. An unpractical people, it must be confessed, and tenacious of evil memories. But such is their unhappy point of view. The confiscations disinherited not a class, but the whole race of Irishmen.

For a century after the settlement by William of Orange, the Irish, now proscribed and disinherited, were so held down by the strong hands of Government, that they never once attempted insurrection. They even allowed to pass the chances offered by the Scottish rebellions of 1715 and 1745. The pause, however, was not a peace, but a truce, during which the fettered nation brooded over its wrongs. What was to be the next phase of its deplorable history?

Sir William Petty estimated the population in 1672 at 1,100,000, of whom 800,000 were Irish, and 300,000 English and Scotch. The wars of the Revolution, and the expatriations, voluntary and compulsory, which followed them, must have so checked the growth of population that we may assume it the same in 1690 as in 1672. But the population by 1731 exceeded two millions; by 1761, three millions; by 1791, four millions; between 1791 and 1835 it more than doubled, and Ireland contained over 8,000,000 souls! In the vast fungus-like growth of human beings the Irish were by far the most prolific element. In the five centuries of feuds, between 1172 and 1672, they increased only from about 300,000 to 800,000. In the next century and a-half they increased from 800,000 to 6,500,000! In 1733, the number of Papists was estimated to be less than a million and a-half; in 1834, according to an official return, they numbered 6,427,712. They had more than quadrupled in a century. The race that at one time could have been contained in a moderate-sized city, filled all the

nooks and crannies of the kingdom. Unfortunately, the circumstances under which this great population came into being, instead of obliterating the memories of the past, kept them bright and clear in ever present suffering. The very framework of society seemed designed to unite the anciently disunited people in a community of miseries and antipathies. The priests, in defiance of the law, and of the rewards offered for their apprehension, never deserted their flocks. They kept alive the traditions of the people while ministering to their spiritual wants. Parents handed down the old tales of suffering to their children, and these again to their children, and the past was ever present to the moody people. By nature imaginative, sensitive, and ardent, the Kelt listened to the wrongs of his country, magnified and distorted in oral recitals, till they incorporated themselves with his very being, and he felt all that his race ever endured as if he had suffered it personally. And the millions of the Irish grew up in hatred and detestation of England.*

Petty believed that the Irish would not easily rebel again, because "six of eight of them live in a brutish, nasty condition, as in cabins, with neither chimney,

* In many cases the hatred of England, and the Irish class antipathies, seem to be supported less by definite ideas of the past, than by watchwords and meaningless party cries. In Belfast the lower orders are divided into those who, when drunk, leap in the air, and cry, "To hell with the Pope;" and those who, in a like condition, shout "Death to King William!"—party expressions, for using which several persons are almost every morning convicted. The memory of Cromwell is execrated, in connection with transactions which took place in parts of the country that he never visited, and in other times than those in which he lived. This is what we should expect. It is none the less true, that it is in the ancient history of the country, as popularly understood, that the antipathies have their common basis.

door, stairs, nor window; and feed chiefly on milk and potatoes, whereby their spirits are not disposed for war." The potato-eaters did, however, very soon after rebel and extract the treaty of Limerick from their oppressors at the sword point. That done, they settled to their potatoes and low spirits, in worse case than ever under the penal code instead of the treaty. They clung to the land, of course, as to life—their cabins and patches of potato ground. They used to neglect marriage and the proprieties of life. They now became ominously decent, finding the only solace of their lives in love and the family affections. They were in the condition most favourable to the growth of population. The moral checks on marriage—self-respect, the hope of rising in the world—operated scarcely at all; the physical but feebly. Satisfied with the poorest cabins and meanest fare—relying on the potato, and content with it—they reared their children to become, like themselves, labourers on ever-diminishing patches of the land. The landlords might have checked this progress by prohibiting the subdivisions of farms, but they did not. Tyrants by position, their only interest in the people was to get out of them as much as possible. In their increase, they saw simply a present advantage—the increase of rent, through the increase of competition for the soil. The absentees, who were numerous, knew nothing of what went on, and cared nothing so their rents were remitted. Resident or absentee, the landlords felt their possessions to be insecure, partly from the state of the country, but chiefly from the state of their titles. The fact that few of their titles would bear inspection was the chief obstacle to such a system of registration as would give security to titles. In consequence of this insecurity, again, they took no such interest in their

estates as landlords usually take in well-settled countries. They regarded their estates as tenants at will regard their farms, looking rather to present profit than to permanent improvement. Had there been a poor-law, to throw the support of a beggared people on the land, the landlords would have been more chary of fostering a population that was ever going lower the greater it grew. Scotland and England had poor-laws; but for Ireland, full of paupers, no such law had been thought of. To have proposed it, would have been to ask the oppressors to support their victims. So, for long, the subdivision of the land proceeded, the population grew, and rents went up till it was impossible they could be paid. Rent was mostly paid by labour done for the landlord; and while the money rent went up, the money value of labour, owing to the same cause, went down, till the year's wage became less than the year's rent. The peasants became debtors first, and then beggars—their very lives at the landlord's disposal. Many of them were from time to time evicted, and joined the miserable army of wandering mendicants, numbering some hundred thousands, who represented the evicted septmen of the earlier times. Thus, as the Irish grew in numbers, they grew in wretchedness. I have been speaking of course of the peasants merely—the "six of eight" of Sir William Petty.

When the population had become dense, and the difficulties of subsistence pressing, a sudden and temporary change of system increased the national misery. The better class of farmers, finding agriculture too hazardous under the system of short tenures, bade for large farms as cattle tracts, and the landlords accommodated them. The cottiers had to be cleared off to make way for cattle and pasture-enclosures. It was

undoubtedly this change which led to the diffusion of Whiteboyism, which, originating in Munster in 1761, spread rapidly over Ireland. The Whiteboy Society was a secret one, which, springing out of purely local causes, was thus diffused. It gave organisation to the peasants. Secret societies were to be henceforth the new and characteristic form of Irish combination.

The occasion of the rising of the Whiteboys or Levellers, was the tyranny and rapacity of the landlords, and the exactions of the tithe proctors—"harpies," says one writer, "who squeezed out the very vitals of the people, and, by process of law, dragged from them the little the landlord had left." This strong language seems justified by a statement by the Lord Lieutenant to a commission of inquiry into the causes of the rising. "I know that it is impossible for human wretchedness to exceed that of the miserable peasantry in the province of Munster. I know that the unhappy tenantry are ground to powder by relentless landlords. Far from being able to pay tithes, they have neither food nor raiment for themselves." "As to the peasantry of Munster," said the Attorney-General in 1787, "it is impossible for them longer to exist in the extreme wretchedness under which they labour." Of course the aim of the poor creatures, in their Whiteboyism, was to regulate rents, to raise the price of labour, and oppose the collection of tithes and some other taxes, which they could not pay; in short, they aimed *at living*, which they found they could hardly do, under a law of landlord and tenant in which their interest had never been contemplated. Landlords, tenants who bade high for land, tithe-proctors, and tax-gatherers, were thus their special victims. Their instruments of justice were such rude means as arson, murder, horrible beatings and mutilations nigh unto

death. The long pent-up fires of hate having once burst out, were thus terrible. The insurgents took the name of Levellers from their levelling all the enclosures of the land, to which practice they at first confined themselves. The immediate cause indeed of the rising, was the enclosure of a common. Some Munster landlords having let their lands at utterly exorbitant rents, the tenants stipulated for and were allowed the use of certain common land to make their bargains tolerable. Afterwards, however, the landlords resumed the common, and enclosed it.

The Whiteboys continued their disturbances for several years, in defiance of the exertions of the military and severities of the criminal law. As the consolidation of farms proceeded, the organisation spread with it from Munster into Leinster and Connaught—the numbers and atrocities of the Whiteboys increasing with every eviction. By 1775 they were making such head in Kildare, Kilkenny, and Queen's Counties, that a special Act was passed for their suppression. They continued the disturbances, however, almost without interruption down to 1785, when the wave of disturbance broke away to the south, and reappeared in Munster as the insurrection of the Rightboys—Whiteboys with a new name, and animated with bitter hostility to the clergy, who fled before them in terror to the towns. The proceedings of these insurgents were mysterious, and very alarming to the Government. Bodies of five thousand of them at a time were to be seen marching through the country unarmed, a spectacle not void of political interest. "In their proceedings," reports the Lord Lieutenant, "they have shown the greatest address, which is the more alarming, as it demonstrates system and design." Meantime, within the

same period, had appeared the Oakboys and the Steelboys, outdoing one another in atrocities. Their sudden risings filled the country with alarm. The oppressors trembled as do gay skaters when great cracks suddenly sound across the ice. The Oakboys, Steelboys, and Rightboys, all aimed, like the Whiteboys, at redressing evils connected with rent and tithes.

The disturbances begun by the Presbyterian Peep-of-day-boys in the north in 1786 brought the element of religion into play. A new and fiercer wave of insurrection rolled southwards, involving the whole peasantry, and continuing till the peasant movement met and was lost in the movement of the upper classes, which ended in the rebellion of 1798.

The Peep-of-day-boys searched the houses of the Catholics for arms. Often they burnt and destroyed as well the houses as the chapels of the Catholics. The Catholics, in turn, organised themselves as Defenders. The rival organisations, commencing in Armagh, were quickly extended. The Defenders soon assumed the aggressive. Insurgents under this name rising in districts where no Protestants existed, filled them with every species of outrage. The Peep-of-day-boys ultimately became Orangeboys or Orangemen; the Defenders, merging into the United Irishmen, were finally lost in the important movements of 1798.

So far of the Irish peasants and their reactions under suffering down to the date of the Rebellion. Their miseries united them in extensive secret confederations, not designed at first for political purposes, which, however, they afterwards subserved. Similar sufferings might have had similar results in a people whose history had been different; but the sufferings and combinations of the Irish peasantry are seen to have

sprung directly from their history,—from those settlements of the country which erected society on a basis of antipathy between its higher and lower sections; a small Protestant ascendancy ruling the proscribed Catholic mass; a tenant class without rights, under alien landlords made powerful by the law and unrestrained by the sense of justice or mercy.

While the Irish peasants were being thus beggared and rendered desperate, the native Irish aristocracy and middle class were sunk in a profound political apathy under oppressions that had not become tolerable through being constant, and seemingly irremovable. The aristocracy had lost position and influence as their landed estates crumbled under the penal laws. The substantial Catholic farmers had gradually given place to their more favoured Protestant competitors; many of them had even sunk to the level of the peasantry. The class of traders, however, had better fortune, and embraced many men of wealth, intelligence, and energy. Their disabilities were indeed so many qualifications for success in business, as they left no objects, interests, or occupations to draw them aside from money-making. Had the Irish been free to do it, they must in time have recovered, by purchase, a great portion of the soil; which being early perceived, led to those laws which prevented them investing money either in land or heritable securities. The prohibition was not unattended by advantages. Wealth increased in their hands the more rapidly that it could only be employed in manufactures or commerce. There was nothing, however, in their prosperity to lighten the sense of being outcasts in their native country. On the contrary, they must have felt it the more keenly the richer they grew, as a slave with a large peculium has the quicker sense of the

advantages of freedom. We may see what their feeling was, and the completeness of their prostration, in the subdued and supplicatory tone in which they implored George III., on his accession to the throne, for some mitigation of their condition. The King having declared himself "the friend of religious toleration," the Irish Catholics ventured very humbly to submit to him a statement of their grievances. "Overwhelmed with affliction, and depressed by our calamitous and ruined circumstances,"—so opens the address, which spoke the truth as concerned the main body of the Irish,—"we beg leave to lay at your Majesty's feet some small part of those innumerable and unsupportable grievances under which we have long groaned, not only without any act of disobedience, but even without murmur or complaint."

It was not, however, from the King or his Government that relief was to come. When rogues fall out honest men get their own. The struggles between the Irish Ascendancy and the English Government for the supremacy in Ireland, concurring with the American war of independence and continuing down to the French Revolution, procured for the Irish numerous relaxations of the penal code.

England, since the time of Henry VII., had claimed the supremacy in Ireland in legislation and jurisdiction. No Parliament could be held in Ireland without the consent of the King and his Council, and all statutes passed in England were effectual in Ireland. On the other hand, the Irish Parliament, the organ of the Ascendancy, had long been so completely the creature of the English ministers, that while it could of itself neither originate nor complete any act of legislation, it was rarely slow to pass such measures as were called for

by English policy. A consequence of this dependence on the English legislature, and subservience to English ministers, was the regulation of Irish trade in English interests, as they were conceived according to the notions of the time. Ireland had neither free trade with England nor with the British colonies; while her manufactures were put under exceedingly unfavourable restrictions, and some of them even interdicted, as interfering with the trade of England. This highly prejudicial state of matters had led to great discontent in Ireland in the only class that dared to express discontent. On the breaking out of the American war, the Ascendancy saw a chance of extorting from England's weakness a measure of independence and free trade which they had in vain demanded from her justice. In 1775 they began boldly to assert their rights. Government saw the danger and prepared to meet it. "Ireland is American," said Lord Chatham, defining the danger of the time, as that of to-day might be defined by saying "America is Irish." The more probable a quarrel with the Ascendancy, the more necessary to the Government was an alliance with the Catholics. They threw a sop to them. By the concessions of 1778, the Irish were permitted to take long leases of the land, and even to buy it, under certain restrictions.

The Irish Volunteers represented not Ireland, but the Ascendancy clamouring for free trade, a reformed Parliament, and political independence. They played their cards badly, and lost the game. It is amusing now to read their eloquent speeches in the light of their acts. The glowing patriots and advocates of liberty decided, in public convention, against the admission of the Catholics to the franchise in their projected Parliamentary Reform! In 1791, when the Catholics, having

taken heart and organised themselves, desired to petition the Irish Parliament for admission to the franchise, they could not get a member of Parliament to present their petition! And by this time they numbered considerably more than three millions, in a population of four millions.

The French Revolution having now alarmed all the governments of Europe by a sudden revelation of the powers of the people, the British Government hastened to make further concessions to the Catholics. In 1792 they were granted the right of education, admitted to the bar, and allowed to intermarry with Protestants. Their spirits rose as their case improved. Much remained to be conceded, and, assuming a bolder tone, they began to demand it. Enumerating the various disabilities which still shut them out from the constitution, they asked, "Where is the people who, like us, can offer the testimony of a hundred years' patient submission to a code of laws of which no living man is now an advocate, without sedition, without murmur or complaint? Our loyalty has undergone a century of severe persecution for the sake of our religion, and we have come out of the ordeal with our religion and our loyalty. Why, then, are we still under the ban of our country?"

The Catholic organisation had now become powerful. The organisation of the United Irishmen, begun by Wolfe Tone in Belfast in 1791, overlay the country. Simultaneously the peasant organisation of the Defenders —summing up Steelboys, Oakboys, Whiteboys, and Rightboys—filled Ireland with outrage and alarm. The leaders of the United Irishmen and of the Catholic organisation were known to be in communication with the revolutionary French Government. It was a time

for new concessions to the Catholics, and in 1793 they were admitted to the political franchise and the subordinate civil and military offices;—they were still, however, shut out from Parliament, the bench, and the higher military and civil offices. These last concessions alarmed the Ascendancy, and had, to a great extent, an effect which, some say, they were designed to produce. The Catholics, it was rumoured, would next get into Parliament, and recover the land! There was a split in the popular camp, and the project of a republic, in favour of which the various organisations were uniting, was at the last given up by the Presbyterian traders of the north, who had started it, and was left to be carried on mainly by the Irish Catholics.

The state of Ireland again became critical. The organisations, called into existence by misgovernment and delays of justice, had power and the disposition to use it. As Earl Fitzwilliam, when Lord Lieutenant, frankly put the case to Mr Pitt, the choice was between a just government with reforms and concessions, or an unjust government to be carried on by corruption till it led to rebellion and—whatever might happen. Pitt made his choice—corruption and rebellion—and forced the latter to a head. It was not difficult work. All the organisations were absorbed in that of the United Irishmen, bent on freeing Ireland from the English yoke and making her an independent republic; the French were hastening to their assistance with a powerful military force, and what was most wanted—arms; when the measures of the Government precipitated the rising, and for a month the unarmed and half-armed Irish were given up to the sword, the scourge, and the pitch cap. The rebellion was suppressed through the slaughter in one month of 50,000 Irishmen, "mostly in cold

blood," say the Irish historians, at a cost of 20,000 lives within the same time to the Government. "It was put down by Irish whisky," say the English libellers, referring to the drunken excesses of the rebels, by which they threw away what chance of success they had. Ireland, at any rate, was again prostrated. The French came late; when they did arrive, it was to find that those they came to assist had been crushed.

The Irish Parliament, the facile instrument from the earliest times of English misgovernment, now performed an act which must be recorded. Hitherto the Parliament has barely been mentioned. In the interests of morality its history should by every one be ignored and forgotten. It never was the organ of the Irish people; and while they may dwell with pride on the names of the few eloquent and patriotic men who figured in its last years, they should rejoice that it is gone for ever. It was the organ of the Anglo-Irish, and a tool always easily adjusted to the purposes of the English Government even against them. Its history is truly the shame of England rather than of Ireland, for if its members were corrupt they were English Ministers who debased them. The Union was now the act of this degraded body. Almost the only good thing it ever did was when, in the year 1800, it voted its own annihilation.

The Union at first barely affected the surface of Irish society; the under currents went on as before. The local disquietudes continued; the number of the discontented in Dublin was greater than ever. A new cause had given a spur to the growth of population, which now went on faster than before. This was the political enfranchisement of the Irish Catholic population in 1793. The landlords thereafter carried on the subdivision of the land on principle, with a view to the

creation of votes by the multiplication of "freeholds," leases for lives being held to be freeholds by the Irish Law Courts. They looked on the tenants as mere property, to be driven in herds to the poll. The new "good plot devised for the reformation of the realme"—the extension of the franchise—was not to "prosper or take good effect," owing to "the fatal destiny of the land," any more than the other and more ancient ones pathetically referred to by Spenser.

There was scarcely a year from the date of the Union down to 1835, in which measures had not to be taken to preserve the peace of the country. A Select Committee in 1801 reported the existence of a secret and extensive conspiracy against the Government. There was a rebellion in 1803; the Habeas Corpus Act was suspended, and martial law established. In 1806 the Thrashers—who resembled the Whiteboys—appeared in open insurrection, and perpetrated the most savage cruelties. The King's judges, upon a special commission, could not move about the country except under a military escort. An Insurrection Act was called for by disturbances in Limerick in 1807. In 1811 and 1812 the counties of Tipperary, Waterford, Kilkenny, Limerick, Westmeath, Roscommon, and King's County, were the theatre of sanguinary tumults. In these years, and in 1813, according to a declaration of the Lord Lieutenant, "the greater part of Ireland was a prey to the most frightful excesses. Armed bodies of men paraded the country levying contributions, administering oaths, enforcing their regulations about land, inflicting the most cruel punishments, searching for arms, breaking into the houses of respectable people in open day, and even making a stand against the military." In 1814 appeared in one district the Caravats, in another the

Carders, perpetrating the most revolting cruelties. They tore the flesh from the bones of those who disobeyed their mandates. Two coercive acts were the result. In moving for one of them, Mr Peel declared the disturbances to be most alarming. "The terror of the law in Ireland," he said, "seemed not to survive the cause which set it in motion. As quickly as one combination was suppressed, others sprung up, wide-spread and secret, and defied the law." It must suffice to give the names of these terrible peasant societies, some of which survived till recent times, and may still exist. There were the Whitefeet, Blackfeet, Shavanats, Rockites, Terryalts, and Ribbonmen. In 1815 Limerick and parts of three other counties were put under the Insurrection Act. In 1816 Mr Peel had again to sketch the state of Irish society. "Formerly," he said, "tumults and outrages could be traced to particular causes; but those which now prevail seem to be the effect of a general confederacy in crime—a comprehensive conspiracy in guilt—a systematic opposition to all laws and municipal institutions." In 1817 the Insurrection Act was extended to Louth; during 1817 and 1818 the state of Limerick and Tipperary was dreadful, and both counties were under the Act. In 1820 Galway broke out. In 1821 Limerick became once more the scene of the most deplorable outrages, while Munster and portions of Leinster and Connaught were in open insurrection. Matters were nowise improved in 1822, when every province of Ireland was agitated with the disturbances. The Insurrection Act had to be re-edited. "The system of insubordination," said Mr Goulbourn, "of which the distinctive marks were to be found in every part of the country, had been for some time progressively increasing, and had in one district been

matured into open insurrection and rebellion." The country was at once afflicted and disgraced by the most terrible excesses, by burnings, robberies, and murders. In 1823 a renewal of the Insurrection Act was recommended by the Lord Lieutenant; it was again proposed for renewal in 1824. Between 1825 and 1829 the agitation for the last step of Catholic emancipation was at its height, and added to the confusion. The old Tory principle of non-concession, till concession lost all grace and effect, was again persisted in. "It is a bad business," the old Tory Duke remarked, "but we are aground." Being no longer able to refuse it, Government granted "Relief" to the Catholics, who now became eligible for the highest public offices and for seats in Parliament. And what at the time was the state of Ireland? It was described by Sir Robert Peel in introducing the Relief Bill. "A dreadful commotion," he said, "distracted the public mind of Ireland; a feverish agitation and unnatural excitement prevailed, to a degree scarcely credible, throughout the whole country. Social intercourse was poisoned there in its very springs; family was divided against family, and man against his neighbour; in a word, the bonds of social life were almost dissevered, and the foundations of public justice corrupted. The spirit of discord walked openly abroad, and an array of physical force was marshalled in defiance of all law, and to the imminent danger of the public peace." The peace in Ireland! There never had been peace; and the truce had been broken ever since 1761.

Catholic Emancipation came too late. Much had been hoped from it for the tranquillity of Ireland; but Ireland was not tranquil. Its opponents exulted; its advocates wondered at it having so little effect. For one thing it left standing the English Church in Ireland,

the symbol of all that was unjust, tyrannical, and disgraceful to humanity in the system of bondage from which the Irish had escaped. Another cause powerfully counteracted such tranquillising effects as the Emancipation might have had. This was the success of Belgium in 1830 in dissevering her union with Holland, which awoke new hopes in the leaders of the Irish, and made it neither their wish nor policy that tranquillity should exist. Perhaps, had their aims been different, the result would have been the same. The temper of a people cannot be permanently changed by a sudden change in the law; and in Ireland, up to this time, the function and value of law could never have been appreciated, and was not understood.

The Irish were at last free, but they were not tranquillised; the disturbances continued as before. In 1832 the state of the country was frightful. The popular ferment had risen to general insurrection, and it was doubted whether there were troops in the country to make head against the insurgents. It was not merely the Catholics who were excited; the Protestant fanaticism of Ireland was in a blaze. There was the hope of re-establishing the Ascendancy. Earl Roden was rolling into the presence of Majesty a petition on great wheels—a petition 4500 feet long, signed by 236,000 men "devoted to the constitution, and determined to be free!" There was the hope of repealing the Union. The association that had carried Catholic Emancipation was reorganising and looking forward to the Repeal. Between the religious fanaticisms and the political fanaticisms, and the agitations of their rival organisations, the country was distracted. There was a call for martial law, and it was granted. Each of the years 1833 and 1834 had and required its Coercion

Act. And so we arrive at the year 1835, when the trial was to be made of a new regime for Ireland.

Of the state of Ireland between 1835 and 1839 a pretty full account will fall to be given hereafter. It is enough in this place to state very briefly the facts necessary to be noticed, to give to this sketch such completeness as it is capable of. In 1835 the population of Ireland was 8,000,000 (the exact number in 1834 was 7,943,960). Of these, according to an official report in 1836, two and a-half millions were absolutely destitute for a large portion of the year. There was still no poor-law in Ireland. The trade of the country was good and increasing, but the main body of the people were still clinging to the land, and had no share in that "national prosperity" of which trade statistics are the exponents. The representatives of the "six of eight" of Sir William Petty were still struggling with the old difficulties. Their cabins were, if possible, nastier than ever; milk had ceased to be an article of consumption among them; and they ate, as their common food, a coarser, but more prolific potato than formerly, the lumper which used to be reserved for their pigs. There were the old difficulties regarding their relations to the land. The landlords were still, for the most part, tyrants or absentees, or with middlemen interposed between them and the tenants. Many of them were now in debt, and were in fact, though not declared, bankrupts. There were still the old evils arising from the insecurity of landed titles, and from the law of landlord and tenant, which gave the landlord the right against all comers to the rent, and the tenant no interest in land improvements. Many of the estates were in Chancery, and had been there for the best part of half-a-century. The system of fixing rents by competition among the peasants still

prevailed, with the usual result of fixing the rents so high that it was impossible they could be paid. There were frequent evictions going on. There were ever new combinations—the chief of which was Ribbonism—forming among the peasants to secure their interests by outrage and disorder. There were the old difficulties of the tithe collection, aggravated by the failure of Government to carry the Tithe Commutation Bill of 1834, and by the admissions on which that bill proceeded. There was O'Connell meditating Repeal, and halting between dislike of the Whigs and fear of the Tories—dislike of radical changes which might destroy his importance, and fear of a recurrence to the principles and government of the Ascendancy. Opposed to O'Connell's organisation was that of the Orange Society, which was the more formidable of the two, from the society being secret and its members armed. These two organisations represented the fears and hatreds which divided the main sections of the people—the nation of the tribes, and the nation of the conquerors. Agrarian crimes, faction fights, occasional insurrections, perpetual agitations in connection with land, politics, or religion, were the symptoms of the universal discontent and inquietude.

Such is the account I have to give of the state of Ireland, and its causes, when Mr Drummond went over to it as a member of the Government in 1835—the country to whose service he thenceforth devoted himself, and for which he died. It is an account necessarily very general and imperfect, and wanting in many qualifying and explanatory statements, which, however, if introduced, would have rendered the sketch disproportioned to its purpose and place in this work.* The main

* The reader who may desire to test the general accuracy of this

points in the deplorable history are sufficiently marked. They are—the partial character of the original conquest of Henry II., retarding the progress of native civilisation;

account, will find the books which the writer consulted in the following list, arranged as nearly as possible in the order in which they are founded on in the text:—"Giraldi Cambrensis Opera," ed. by Brewer, chap. xiv. of De Rebus a se Gestis. Lond. 1861; Vallency's "Collectanea de Rebus Hibernicis. Dublin, 1786," [a series of valuable papers on Ancient Ireland]; Boates' "Ireland's Natural History. Lond. 1652;" "Jacobi Waræi de Hibernia, &c. Ed. sec. Lond. 1658;" "A View of the State of Ireland in the Yeare 1596. By Edmund Spenser. Dublin, 1632;" "A Discoverie of the State of Ireland. By Sir John Davis. Lond. 1613;" "The Political Anatomy of Ireland in 1672. By Sir William Petty. Lond. 1691." [The five works last mentioned, and several others of much value, are brought together in two volumes: "A Collection of Tracts and Treatises illustrative of the Natural History, Antiquities, and the Political and Social State of Ireland. Dublin. Reprinted by Alex. Thoms & Sons, 1860." These volumes have been printed by Mr Thoms for distribution only among his friends.] Hallam declines Petty's computations as "prodigiously vague." They *are* unsatisfactory, but they are the best that are to be had. "The Annals of Ireland by the Four Masters. Connellan's ed. Dublin, 1846." [It is from the elaborate notes in this work that I have taken the trouble to gather the numbers of the Septs in some districts of Ireland, given at p. 187.] "Irish Statutes, vol. i. Dublin, 1765." [The Kilkenny Statutes are not in this volume. An account of them will be found in Sir John Davis' "Discoverie," "Tracts and Treatises," vol. i. p. 642, where also is evidence of the fact, that the Irish petitioned for admission to the Pale and benefits of English Law; and see Smyth's "Ireland," vol. i. p. 199. The Kilkenny Statutes were confirmed in their main provisions in 1495,—*Rot. Parl.* cap. 19.] For the proclamation by James I. of his Non-toleration (dated 4th July 1605), see Plowden's "Historical Review, Lond. 1803" (vol. i. p. 102). The proclamation was printed about 1843; but I have not been able to get a copy of it. For modern accounts, see "Ireland, Historical and Statistical, by George Lewis Smyth. 2 vols. Lond. 1844;" and "History of Ireland and the Irish People, by Samuel Smiles. Lond. 1844." Smiles is intensely Irish; Smyth takes a genealogical view of almost the whole matter. Leland's "History. Lond. 1773," 3 vols.; and

the primitive character of that civilisation preserved to a late date; the suddenness and bloodiness of the convulsions by which it was destroyed, and the unhappy

Plowden's "Historical Review of the State of Ireland. Lond. 1803," (3 vols.), are standard and well-known works. "Ireland, Social, Political, and Religious, by Gustave De Beaumont," now in a 3d (French) edition (there is an English edition by Taylor, Dublin, 1839), is perhaps less known. It is written from an Irish point of view, but is not the less an able performance. "Irish History and Irish Character. By Goldwin Smith. Oxford and London, 1861," is perhaps as fair, dispassionate, and philosophical an outline of Irish history as exists. "Ireland Before and After the Union. By R. M. Martin. London and Dublin, 1848," gives as lenient a view of the historical business as possible—has what the Irish would call "a strong flavour of the Castle." "English Misrule and Irish Misdeeds. By Aubrey De Vere. Lond. 1848," is Irish, yet true and effective. The whole of Hallam's 18th chapter "On Ireland," beginning p. 699, vol. ii., of "The Constitutional History of England. Lond. 1827," is of course worth careful study. For the passage from Hallam, cited in the text, see *idem*, vol. ii., p. 738. The best account of the Rebellion of 1641 is in "An History of the Life of James, Duke of Ormonde, 1610–1688, 2 vols. fol. By Thomas Carte. Lond. 1736." It is sufficient to refer to Mr Carlyle's "Life of Cromwell," and Macaulay's account of the Tyrconnel wars. As to the state of the lower classes, and as to the oppressions of which they were the victims, circa 1776–78, see "Tour in Ireland, by Arthur Young, 2d ed. 2 vols. Lond. 1789."

For the Treaty of Limerick see Smiles' "History," p. 240. It is there printed at length. For the acts passed in despite of it, see "History of the Penal Laws against the Irish Catholics from the year 1689 to the Union. By Sir Henry Parnell, Bart., M.P. 4th ed. 1825." And see the footnotes to Hallam's "History," vol. ii. pp. 761, 762; also O'Connell's "Ireland and the Irish," as cited by Smiles, p. 270. For the Petition of the Irish Catholics to George III. on his accession to the throne, see Smiles' "History," p. 317.—It is printed at length. For a defence of the Penal Code, see "Case of Toleration. By Edward Synge, &c., 2d edition. Dublin, 1726." For an account of the Risings after 1761, see "Irish Disturbances and the Irish Church Question. By Sir George Cornewall Lewis. Lond. 1836," and see "*Edinburgh Review*," vol. lxx., p. 503, art. on the "Report of the Roden Committee."

circumstances which led the untrained people to regard, and hate, the new laws and institutions as mere instruments of oppression; the unfortunate laws which from the first prevented the intermixture of the conquering with the conquered race, and rested society on a basis of settled antipathies between its upper and lower sections; and, finally, the peculiar history of the emancipation of the native race. Winning nothing except through the rivalries and fears of their Anglo-Irish and English oppressors, the native Irish were trained to watchfulness, organisation, and agitation for more than half a century, and so were cursed alike with evil habits and vile leaders, whereby their freedom, when obtained, was robbed of value and effect. The Union, though carried by fraud, was the first really good thing done for Ireland by this country, and, had it been accompanied with the concession of the Catholic claims, might have done as much for its peace as it has done for its prosperity. Neither the land nor the Church question is now hopeless. In a manner truly appalling, famine has solved at once the problems of over-population, bankrupt landlords, and insecure titles. The Church, human justice must soon dispose of. And since, from 1835 at least, the aim has been to govern Ireland well and justly,—could Irishmen now be reasonable, being free and well governed, they might be happy. Yet the country itself is as disaffected as ever; a race of expatriated Irishmen inherit the traditions and hatreds of their proscribed and disinherited forefathers; and the "secret scourge" is still hanging over England.

No one can visit Ireland without being impressed with the universal discontent. There is disaffection in some form everywhere, and in almost every grade of society. It seems to be hereditary in the Irish heart

and brain. Nay, it is even, as it were, in the very soil or in the air. It may be seen in some who have been but recently settled in the country, and the sojourner may feel that, did he remain long there, he should grow disaffected himself. The discontent in the better classes has no distinct assignable cause. It seems rather to be referable to a chronic mental perplexity, induced by the national history. The cause of disaffection among the lower orders is more apparent. The poor peasant, with his famished features, keen eyes, and murderous bludgeon, is, naturally enough, always ready to try the desperate chances of revolt. Till he is transformed into a well-fed, and, as a consequence, gay and happy being, there is no hope for Ireland.

What part Mr Drummond took in the government of Ireland, what he did and co-operated with others in doing, and what he aimed at doing for the good and tranquillity of the country, it is now my business to record.

CHAPTER XIV.

IRELAND, 1835–1839; A NEW REGIME FOR IRELAND; THE MULGRAVE ERA; DRUMMOND'S PART IN THE ADMINISTRATION; HIS QUALIFICATIONS FOR HIS OFFICE; HIS ZEAL FOR THE REDEMPTION OF IRELAND; HIS DUTIES AS UNDER SECRETARY; THE IMMEDIATE SCOPE OF THE FOLLOWING CHAPTERS.

THE feeling was general, in 1835, that something, or several things, must be done for Ireland. The state of parties in Parliament made it probable that something would be done, and certain that several things would be attempted. The Whigs owed their resumption of office, as they were for years to owe its continuance, to the support of the Irish Liberal Members. The exigencies of their position thus urged them to efforts on behalf of Ireland. Measures which had been initiated or contemplated on principle, were now to be pursued on party policy; which also made more manifest the necessity for other measures before unthought of. The Whigs announced a new regime for Ireland. They set to themselves the task of amending, by legislation, some of the social and some of the most important political institutions of that country. They sent over to it a government directed to administer its affairs on new principles; which should aim at discharging religious rancour from the public mind by acting with imparti-

ality between the rival Churches; which should reform the Justiciary of the country; which should establish and maintain order by the vigorous exercise of the ordinary powers of law; and which should develop in the Irish, what they so much wanted, respect for the law, by admistering it with the strictest integrity. The declaration of this new order was as honest as it was hopeful. It was certainly as honest as the terrified opposition which brought the new order to naught. The radical evils of Irish society, it may be conjectured, would not have yielded to any or to all of the methods of treatment proposed by the Whigs. But how much more satisfactory would it have been to-day had the insufficiency of the methods been a fairly ascertained fact, instead of a conjecture!

The three leading figures in the Administration established in Ireland to carry out the new regime were the Viceroy, Lord Mulgrave, afterwards Lord Normanby; the Chief Secretary, Lord Morpeth; and Mr Under-Secretary Drummond.

The Viceroy, is described by Dr Madden* as, "in figure, accomplishments, habits, and talents, the nearest approximation ever witnessed to the ideal of an Hibernian Viceroy." He was amiable, generous, and even princely in his disposition. "Without a tenth part of the resources that former viceroys possessed; without the aid of the Irish aristocracy; he nevertheless, by his tact and skill, contrived to keep up one of the most showy and sparkling vice-royalties that ever gratified the local pride of the Dublin public, and the provincial tastes of the Irish gentry. He was gay, dashing, and brilliant, always setting something on foot to amuse and gratify the public, who were caught 'at first

* "Ireland and its Rulers," vol. ii. p. 278. London, 1844.

sight' by his flashy and semi-military appearance, as he gracefully curvetted through the streets." His lordship had abundance of tact, suavity, courtesy—in short, of all the arts of society. "He was the politest statesman, the most gentlemanly governor, and the most urbane minister of his age." It is a fall from this to the highest tribute of all which is chaffingly paid to him, that he looked and bore himself like a true Milesian—"the very model of *a superfine Paddy*." The mental fibre was as Milesian as the physical contour and general bearing. "He was more sharp than masterly, more ready than profound." How far the truth may be hit in an account written in this fashion, it would be difficult to say. There is no doubt that Lord Mulgrave was personally highly popular in Ireland, and was an able man, though not a man of the highest order of ability. A triumphal procession over the country, in the course of which he liberated a considerable number of persons from the jails, and everywhere received ovations as the deliverer of the people, was in keeping with the character above depicted. It was an act of dexterous though questionable policy which, for a time, gave a favourable turn to the popular sentiments.

Lord Morpeth, who afterwards became Earl of Carlisle, is better known. He combined fair business talents with scholarly acquirements and literary tastes. Accomplished, able, and amiable, he was liked by the Irish at once as a man and a minister.

Mr Drummond was the subordinate of these noblemen, with which fact is connected the chief difficulty encountered in dealing with this portion of his life.

The three figures are touched off in a sentence by Dr Madden, in which he speaks of "the *savoir faire* of Lord Normanby, the virtue of Lord Morpeth, and

the admirable powers and not less admirable virtue of the incomparable Drummond." The three are also brought together by Mr Shiel, in his speech on the passage of the Corn and Tariff Bills of 1846 (27th June 1846). Contrasting the Normanby administration with the Tory governments that followed and preceded it—"I will show you," he said, "that a government, conducted on different principles, has been productive of peace. Let yours and Lord Normanby's government be compared. Lord Normanby, beloved by the Irish people, was the Lord Lieutenant; the Chief Secretary, an object to all who knew him of affectionate respect, was Lord Morpeth. You, Mr Speaker, will pardon a breach of order, when, for the purpose of panegyric, it is almost sufficient to give utterance to a name—the Under Secretary was Mr Drummond—who, not born in Ireland, was more than an Irishman in his love of Ireland, and who, at his own and his last request, lies buried in the land for which he died of intellectual toil." Like the Viceroy, Drummond won popularity in Ireland, but in a different manner. The Irish, it has been said, knew not how they loved him till they lost him.

The difficulty is to assign to the subordinate his precise part. Had the object of the Roden Committee of 1839 not been the virtual impeachment of the Irish government, this difficulty might not have existed. Before that committee Drummond was examined as to the whole course of the administration. Had the circumstances been different, his evidence might have afforded a means of discriminating between his own acts and those of his superiors. As it happened, the evidence was evoked in defence of his superiors, to whom he gave the credit of the administration. He

exhibited the reserve of a subordinate even in regard to measures known to have originated with himself. All that appears is, that he had brought under the notice of the Viceroy the state of matters for which the measures provided.

The means, I believe, exist of overcoming to some extent this difficulty; but the time has not yet come when they can be freely used. Avoiding doubtful questions, therefore, I shall confine myself to notorious facts, or such as are vouched by public documents. A measure of success can be attained even within these limits, in an attempt to justify by details the expressions of admiration of Drummond's abilities and self-devotion that have already found place in the histories of the time.

One thing which gave Drummond superior fitness for the duties which the new Irish government had undertaken, was an intimate knowledge of the country and the people. Both of these were well known to him when he went to Ireland in 1835. Eleven years before he had, with Colby, traversed the whole land. In the years from 1824 to 1830 he had enjoyed special opportunities of studying the character and condition of the peasantry. Nearly the whole of the years 1827, 1828, and 1829 he spent in Ireland, passing the summer months in the country, and the winter months in Dublin. In town and country he must have been a frequent and interested listener to discussions on Irish politics. No one could be in Ireland in those years, when the whole land was profoundly agitated by the final struggles of the Catholics for liberty, without going back on the history of their long enslavement and gradual emancipation. We may be sure that Drummond did so. Animated as he was with strong

feelings in favour of popular claims, we need not ask which section of the Irish people had his sympathies.

The Survey afforded excellent opportunities of becoming acquainted with the peasantry. He availed himself of these, and got to know the people well. According to Dr Madden, no one ever knew them better. He says—

"It was the rare union of thought and feeling, of a generous nature with a scientific mind, that won for Drummond the mingled admiration and esteem of so many of the best men of the two nations in Ireland. It was this union also that enabled him to acquire his unrivalled knowledge of every class in Ireland. It is possible that he may have been equalled, but he certainly never was surpassed in his knowledge of Irishmen considered in their social relations. Naturally a man of thought and observation, while in the earlier part of his life engaged in the Ordnance Survey, he had abundant opportunities for seeing the Irish character in all its native force. Lying on the mountain side at night in some savage wild of Antrim or Tyrone, with the stars over his head, and no vestiges of civilisation in the neighbourhood, he would 'draw out' the Irish peasants who came to the Engineers' station from motives of curiosity or the hope of chance employment. No Cockney impudence, no sneer of superiority, was ever visible in Drummond, as he listened to the vague and melancholy narration of some tale of suffering, in which, perhaps the faults of the complaining narrator were as manifest as those of the local tyrant whom he cursed. Unlike most of his companions, Drummond preferred to see the darker and more startling part of Irish character rather than its joyousness and levity. The jokes, and the funny stories, and the droll sayings, he left to be enjoyed by those who were pleased to think that the Irishman was only a fierce Joe Miller, with a furious brogue. He had an eye for nature, and liked to see the original character of the Irish—its wildness and romance, so congenial with the scenery of the Irish landscape—its dark spirit of brooding over wrong—its savage spirit of revenge for personal injury or insult—its poetical sensibility—and its preference for the illusive and the fanciful

over the actual and true. Drummond liked to see all this with his own eyes, and to ponder on it, as he found this romantic disposition united with such an exquisite perception for the droll and ridiculous. He saw—he studied—and, with his genial sympathy, he *felt* the Irish character and nature.

"And so, when he came to Ireland as Under Secretary in 1835, he entered upon the duties of his office with a better preparation for his task than any of his predecessors ever exhibited. By nature he had been gifted with a masculine and vigorous intellect, which had been sedulously improved by an enlarged and systematic course of scientific training. His understanding was singularly clear, and his knowledge of the various subjects to which he had applied it was not merely copious in extent, but precise even in minute details. There was in his mental conformation a decided tendency to the inventive and original, which showed him to be no common man, and preserved him from being *merely* an individual of acquisitions, and nothing more. . . . Having acquired a practical knowledge of the arts by which men are governed in these kingdoms, he went to Ireland in the full possession of physical energy and mental vigour, and with a mind filled with zeal to perform service in Ireland. He believed that Government might effect wonders in Ireland, and he entered upon his duties with a head teeming with projects of reform, and a heart overflowing with affection for the Irish people."*

Another thing which gave him superior fitness for the task which lay before the Irish Government is touched in the last sentence of this quotation. It was his perfervid zeal and spirit of self-devotion. It is no disparagement to the memories of Normanby and Carlisle to say that neither of them can even be suspected of having been animated by the same spirit in an equal degree. The very portraits of the men exclude such a suspicion. The "politest of statesmen" may be at once put out of the field. And between

* "Ireland and its Rulers," part iii. chap. iv.

the Howard and Drummond could a contrast be more complete? The face of the one tells of refinement and an easy lymphatic nature. The face of the other is full of intense earnestness, indicating high intellectuality in union with great nervous force. Men like Mulgrave and Morpeth were incapable of feeling, even for a moment, the power of inward impulse to action which regulated Drummond's whole life.

Drummond was distinguished by another quality which made him the superior of his nominal superiors. It was his power of work—a faculty for transacting business which was altogether extraordinary. "To one like him," says Larcom, "to will and to do were one. Such was his power of concentration that he could fix the whole force of his mind on any subject in discussion, to the utter exclusion of every other; whether the subject were great or small, his mind appeared to grasp and could not be diverted from it." It might be something worth doing could an idea be conveyed of the amount of mere toil which he underwent for Ireland, and how with failing health he laboured in her service to the last.

The routine duties of the Under Secretary were exceedingly various. They comprised the receiving and answering of a variety of communications similar to those made to the Home Department in England, and, in addition to them, reports from the constabulary, and a large daily correspondence with the local and stipendiary magistrates, as well as all applications addressed to the Government on the state of the country. It was his duty, in the absence of the Chief Secretary—whose place for most of the year was in Parliament—to bring under the notice of the Lord Lieutenant all correspon-

dence of an important nature which required his personal attention, and also to communicate regularly with the Chief Secretary and with several public departments of the Government both in Dublin and London. He had daily communications with the Lord Lieutenant, the Chief Secretary, and the Inspector-General of Police, when they were in Dublin, as well as with the law advisers of the Crown.* In the absence of the Viceroy

* Under the Normanby and Ebrington administrations (May 1835 to April 1840) the following gentlemen were successively selected for the law offices of the Crown: viz., Louis Perrin, Attorney-General from 29th April 1835 to August 31; then Justice, Queen's Bench. Michael O'Loghlen, Solicitor-General from April 29, 1835, to August 31; and Attorney-General from August 31, 1835, to November 10, 1836; then Baron of the Exchequer. John Richards, Solicitor-General from September 21, 1835, to November 10, 1836; and Attorney-General from November 10, 1836, to February 3, 1837; then appointed a Baron of the Exchequer. Stephen Woulfe, Solicitor-General from November 10, 1836, to February 3, 1837; and Attorney-General from February 3, 1837, to July 11, 1838; then appointed Chief Baron of the Exchequer. Nicholas Ball, Attorney-General from July 11, 1838, to February 23, 1839; then Judge of Common Pleas. Maziere Brady, Law Adviser to the Chief Secretary from May 1835 to February 3, 1837; Solicitor-General from February 3, 1837, to February 23, 1839; and Attorney-General from February 23, 1839, to August 1840; then appointed Chief Baron of the Exchequer, afterwards Lord Chancellor. David R. Pigot, Solicitor-General from February 11, 1839, to August 1840; then appointed Attorney-General, and afterwards Chief Baron of the Exchequer. They were all Whigs, and, a fact of greater significance, four of the seven, viz., O'Loghlen, Woulfe, Ball, and Pigot, belonged, by ties of race and religion, to the nation of the tribes—the Lower Nation, as it is common to call it in Ireland. They were the first of their race and religion to attain such high offices after the Emancipation. All these gentlemen, it may be believed, heartily co-operated with the heads of the Government in measures for the benefit of the Irish people. One of them, writing to the Author touching the difficulty of assigning to Mr Drummond the special share taken by him in the proceedings of the Irish Government on each occasion, says—

and the Chief Secretary, he was virtually the Irish Government. The correspondence he had to overtake was overwhelming, the times being critical, and demanding the constant exertion of the powers of Government. Generally, the mere routine duties of the office were such as to occupy him from nine or ten o'clock in the morning till seven in the evening.

There were certain of these routine duties which were of the first importance, and in which Mr Drummond took a very special interest—the control of the stipendiary magistrates and of the police. There were others the discharge of which must have been extremely irksome and tedious to one of his nature. The labours by which he sought to benefit Ireland were mostly

"Much was done by, or in concurrence with, the several successive law officers of the Crown; and of the most important State papers and official letters to which his name was necessarily attached, portions were his and other portions theirs, and in some cases the whole may have been written by them, and only approved of by him. But while we gave him advice as he sought it, he gave us the most hearty and unreserved support and confidence; and we always felt that we had in him one who cordially sympathised and helped in every step which could advance the interests and rights of the people."

From the Union down to 1835 it had been the practice of successive Administrations in Ireland not to recognise distinctions of party politics as affecting promotions at the bar: the highest legal and judicial offices were filled by Whigs and Tories indifferently. The result was, that while in England there was a liberal Administration, as, for instance, after the passing of the Reform Bill of 1832, the Irish Administration, which was nominally Whig, was yet really, to some extent, carried on in the spirit of Toryism. To this practice an end was put under Lord Normanby, since whose time the system of having an exclusively party (official) bar has prevailed in Ireland. The credit of the change which, all things considered, is said to have been for the advantage of the country, is divided by Dr Madden between Lord Normanby and Mr Drummond.

apart from the routine; and to these, for a long period, he devoted the hours when he should have rested —beginning work between five and six in the morning, and often labouring far into the night, after dining at eight o'clock. No portion of the routine was ever neglected, however distasteful it might be, or however the time might be grudged which it withdrew from more congenial and cherished labours. This, indeed, has been made a ground of complaint against him. "The spirit of his early education for an engineer clung to him," says Dr Madden; "'work—work—work,' was always before his mind, and it is not going too far to say that he set a preposterous value on mere toil. Thus, for so eminent a man, and so distinguished an official person (enjoying a degree of moral power far greater than his possession of the Under Secretaryship could confer), he stooped to a quantity of unnecessary drudgery which he might have safely left to the underlings of office. But this fault was indicative of his ardent and energetic character, of his untiring mind, and his indefatigable zeal in doing what he considered his duty."

"One thing," continues Dr Madden, "he completely lost sight of in his unintermitting exertions, namely, the idea of political power. He appeared totally unconscious that the ground was rapidly breaking beneath the Melbourne Ministry, and he slaved away in his office as if he had been destined to remain in the Viceregal department during all his life."* This was not so.

* The office of Under Secretary was then a political office, vacated on a change of Government. It is now a permanent office, at present ably filled by Major-General Sir T. A. Larcom. It may be believed that at this moment (12th March 1867) General Larcom is the true ruler of Ireland. Ministries come and go with their suc-

Drummond was keenly alive to the state of parties and the dangers of the Government—most anxious about and watchful of the proceedings of the Ministry, and often profoundly vexed at their mistakes. No one connected with or dependent on the Government had a more intense interest in its endurance. Not because he clung to the emoluments of his post. Since his marriage he was raised above pecuniary considerations. Not because he took pride in his position. He could have entered Parliament, and aspired to the highest offices of the State. Many of his friends, confident of his success, pressed him from time to time to do so. The reason why he so eagerly desired the continuance of the Government was that he believed himself to be engaged in a great and good work, and dreaded lest an opportunity should be lost of carrying it, if not to completion, yet far on the way. "I should anxiously desire to have another year," he writes to his mother, "because I think in that time we should have reaped a part of our harvest." This, written in July 1836, exhibits the spirit in which he toiled on to the end. The work in which he conceived himself to be engaged was the redemption of Ireland, as noble a work as a man ever proposed to himself.

A man of his powers, animated by his spirit, and

cessive Viceroys, Chief Secretaries, and legal officers. The Under Secretary alone remains, familiar with the state of the country, the persons to be dealt with, and the forces at the disposal of the Government. Some years ago Mr Fitzstephen French, in a debate on an Irish question in the House of Commons, remarked, in terms more neat than complimentary to the heads of the Administration:—"Ireland is governed by a colonel of Engineers. In the departments, Carlisle does the dancing, Horsman the hunting, and Larcom the work."

having his opportunities, could be the real subordinate of no one.

Dr Madden says, in contempt for Normanby, that it mattered little who was Lord-Lieutenant, provided "he had Drummond as Under Secretary, and Lord John Russell to give him his political cue." The fact is, the subordinate office, always a most important one, became, while Drummond filled it, one of the most important in the Government. The Under Secretary's influence extended beyond the sphere of his duties to almost every branch and act of the Irish Administration. "There is no survivor of that Administration," says Miss Martineau,* "who will not eagerly assent to the avowal, that one member, Mr Drummond, was the mind and soul of it." The assent has been given, in general terms, as amply as the warmest admirer of Drummond could wish. No proposition, indeed, could well be more strongly asserted or readily admitted.

Still, *ex facie*, Drummond was a subordinate in the Administration, and his life in Ireland falls meantime to be handled with that fact steadily in view. Special acts, admitted to have been his, there still are. He helped in the work of redeeming Ireland—a work yet so far from completion—in three several ways. He helped in the establishment of order, first, by the energetic handling of the forces for maintaining order at the disposal of the executive, and next, through the reorganisation of those forces. He did much towards satisfying the people of the impartiality of the Government, inspiring them with hope, and rendering them content and trusting under English rule. The chief labour of his life, his work on the Irish

* "History of the Peace," vol. ii. p. 288.

Railway Commission, was devoted to securing the material prosperity of the people—to a solution of the land question, in short, in a round-about way, by rendering the Irish less dependent on the land. Lastly, he made valuable contributions to our knowledge of the state of Ireland and of Irish questions. His evidence contained in the Report of the Roden Committee, taken along with those portions of the Railway Commission Report which emanated from his pen, form the completest and most authoritative account that exists of the state of Ireland between 1835–39.*

In the immediately following chapters, it is proposed —1*st*, To give a view of the state of Ireland in those years, chiefly as it appears from the reports referred to; 2*d*, To exhibit the efforts of Mr Drummond and his colleagues in the Government in behalf of order in Ireland—taking, as falling under this head, his im-

* In 1839, a Select Committee of the House of Lords (known as the Roden Committee, from having been appointed on the motion of Earl Roden), took evidence as to the state of crime in Ireland between 1835 and 1839, and as to the whole course of the Administration in regard to its suppression. The object of the inquiry was to test the truth of various grave charges brought against the Government, which shall hereafter be noticed. Before this committee Mr Drummond was the chief figure, not only as the principal witness, but as the member of the Government most referred to by all the witnesses. Of the value of his evidence on this occasion an opinion is expressed by an able writer in the *Edinburgh Review* (vol. lxx. p. 317). "The Committee," says this writer, "have rendered a great public service (however little they may deserve credit for it), in being the means of calling Mr Drummond's evidence into existence. In addition to the opportunities afforded him by his high official situation, his duties as Railway Commissioner have led him to make the most extensive inquiries of all classes, in all parts, as to the moral and social condition of the people, and he has brought to bear upon the matter thus collected all the energies of an enlightened and intelligent mind."

provement of the constabulary, and those acts of his in which the impartiality of the Government was exhibited; and, 3*d*, To give some account of Mr Drummond's scheme for developing, by a national system of railways, the resources of the country, and securing the well-being of the common people.

In these chapters, which are intended to show the work in which Mr Drummond was engaged in Ireland, and the spirit in which he performed his share in it, the object, it must be remembered, is not historical, but biographical. In a history of Ireland between the years 1835 and 1840, many would have prominence who are here overlooked or barely mentioned; persons and events being, as a rule, noticed only as connected with or affecting the life and labours of Mr Drummond. Moreover, by the method of treating this portion of his life, to which it has been found necessary to have recourse, he himself is, to a great extent, the author of the account of the state of Ireland under the administrations in which he served. Should any one think that there is more historical matter introduced than is proper to be found in a memoir, he should reflect that the only good reason that can be stated for writing the life of any one is, that it is instructive, and that, for the same reason, it is proper to make it as instructive as possible.

CHAPTER XV.

IRELAND, 1835–1839; SECRET SECTARIAN AND POLITICAL ORGANISATIONS IN IRELAND; ORANGEISM AND ORANGE PROCESSIONS; RIBBONISM OR RIBANDISM; AGRARIAN OUTRAGES; FACTION FIGHTS; EFFORTS TO ESTABLISH ORDER; IMPROVEMENTS IN THE CONSTABULARY; INTRODUCTION OF STIPENDIARY MAGISTRATES; EXTENSION OF CROWN PROSECUTIONS; SUPPRESSION OF FACTION FIGHTS; SUPPRESSION OF ORANGE PROCESSIONS; REMEDIES FOR EVILS LEADING TO DISTURBANCES; DIMINUTION OF CRIME; DIFFICULTIES IN DEALING WITH RIBANDISM.

In 1835 the Orange system was in full blow. It was a common notion that the United Irishmen formed an antagonistic society under the name of Ribbonmen or Ribandmen. Orangeism was armed and secret; Ribandism secret and unarmed; each had its characteristic public manifestations. These were supposed to be hedge-murders, midnight house-invasions, and fierce personal assaults; those were armed processional demonstrations, spreading terror among the Catholic Irish, and frequently resulting in deadly conflicts.

In 1835–36 the proportions assumed by Orangeism became exceedingly alarming. It numbered no less than 1500 lodges (with secret oaths and pass-words), affiliated with one another under the direction of a

Grand Lodge, whose head was the Duke of Cumberland. A Commission of Inquiry brought out the fact that there were Orange lodges even in the army. In 1836 Mr Hume stated, on authority which was incontrovertible, that there were 200,000 armed Orangemen in Ireland, and that they were accustomed to meet in armies of 10,000, 20,000, and even 30,000 at a time; that these demonstrations tended to breaches of the peace, and that the law could not be administered till they were put down. A suspicion which had got abroad gave additional importance to this statement. It was that the Orangemen were engaged in a plot—known as the Fairman Plot, from the chief agent in it being a Colonel Fairman—to alter the succession to the throne. A resolution was at once passed in the House of Commons, that an address should be presented to the King, urging the dissolution of the Orange organisation, and the removal from public trusts and employments of all who countenanced it. The address was presented, and acted upon. Orangeism was dissolved in 1836, or rather it was resolved into lodges no longer affiliated. The Orange processions and armed demonstrations, however, still continued. They came on as certainly as July arrived, and were, as formerly, followed by riots and outrages. These were, of course, mainly confined to the North and the strongholds of Protestantism.

About the nature and objects of Orangeism there was no dispute. It was the phalanx of the Ascendancy ready at any moment to re-assert their domination by force of arms.

The nature of Ribbonism or Ribandism was more obscure, and a subject of much speculation and controversy. Subjoined is the view of it which Mr Drummond

formed from the whole facts brought to the knowledge of the Government:—

"There are two grounds on which an opinion may be formed of the nature of Ribandism—first, the direct information obtained from informers; and, secondly, the effects ascribed to it. With respect to the effects, on comparing them with similar effects in other counties where Ribandism is not alleged to exist, I should doubt the existence of any such society formed with a view to the commission of agrarian outrages, or founded on feelings of religious animosity. We see outrages of the same character and description committed in other counties to the same and even to a greater extent. From the effects which appear, therefore, I think no conclusion can be drawn as to the existence of such secret combination at all. With respect to the information received from informers, very different conclusions may be come to by different individuals, according to the degree of credit they are disposed to attach to it. There are several (Riband) oaths, which are very different in their nature; the most common one is, as far as I recollect, unexceptionable in its terms. . . . There are other oaths of a highly treasonable and seditious character, but we have no authority, except that of informants, that such oaths are in use by those societies; nor have we in any one instance been able to detect them in administering such oaths. . . . With regard to the members of the society, I think in some instances they may have had in view political or religious changes; but in the greater number they appear to have had no defined object beyond that of standing by one another, as it is called, for mutual defence at fairs, or assisting in the redress of real or supposed wrongs. That, I think, is the general notion of the members of the society; but with regard to the promoters of it, there is less difficulty in coming to a conclusion as to their objects. They are almost all publicans—publicans of a very low class, and of a very bad character. All the meetings are held in the houses of publicans, to whom regular quarterly payments are made; nor is any account returned of the money so received. As to all this our information agrees. We have proof that these societies are got up and promoted by a class of men

who have a very obvious interest in so doing. They not only receive money by way of quarterly payments from the members, but, as publicans, they have a farther advantage in their houses being constantly frequented by them. These publicans appear to keep up a sort of connection the one with the other, and in order to maintain their influence more securely affect a certain degree of mystery. They give out that they act under some high and nameless authority, and that leaders will be forthcoming when the time is ripe, who will ensure the restoration of the forfeited estates, and other such objects as the lowest and the most needy commonly look to as the results to be desired from political changes. Their uniform advice, however, of which they never lose sight, is that for the present all that can be done is to increase their numbers. Their object is, manifestly, to keep up a delusion among the ignorant, and to conceal their real motive, which is nothing more or less than to raise money. The promoters of the system are knaves, and the members their dupes. All the information laid before Government tends to confirm this opinion; and such is the conclusion I have come to, from the examination of the whole of the evidence. A different conclusion may, of course, be drawn by others from the same data. [The fact that Ribandmen are all Roman Catholics does not appear to me to make against this conclusion.] There is so marked a distinction between Roman Catholics and Protestants that it would be almost impossible to find a society in Dublin in which it does not exist. There are Burial Societies consisting exclusively of Protestants, and Burial Societies consisting exclusively of Roman Catholics. In like manner, Benefit Societies, to provide for cases of sickness, &c., are also of an exclusive character. The members of the two Churches keep themselves separate in all cases; there is unfortunately little mixture of the lower classes especially. Even the Temperance Societies are sometimes exclusively Protestant or Catholic. The great Temperance Society of Dublin is not; but there is an exclusive Catholic Temperance Society in Liverpool. The two classes, as I have stated, keep themselves very much apart. The society of the Protestants corresponding and antagonistic to the Riband So-

ciety is the Orange Society. Within the last two or three years the Orange Societies have, I think, considerably decreased. [Along with this fact] should be noted a manifest distinction between Ribandism as it is now reported of, and Ribandism as reported formerly. In all the cases reported previous to 1835, it was common to apply the designation of Ribandmen indiscriminately to all Roman Catholics engaged in contentions with the Orange party—not that it was intended to represent all Catholics as Ribandmen, any more than to describe all Protestants as Orangemen." *

It was alleged that there existed a difference between outrages committed in the counties in which Ribandism was believed to exist, and those in which its existence was not suspected. The difference was said to be, that in the former the outrages were always perpetrated by men from a distance, and in the latter by men from the neighbourhood. Of course, it was believed that the Riband outrages were designed at their club meetings. This opinion Mr Drummond was not inclined to hold.

"There is no evidence, except the unsupported assertion of informants, of an outrage having been planned at any of their meetings; and a strong presumption against this supposition is furnished by the remarkable fact, that in no one instance during several years have our informants, though members of these societies, and present at their meetings, ever given notice of such intention prior to its execution. It is quite manifest that an association composed of men who are some of the worst characters in their respective neighbourhoods, and who are pledged to stand by one another, must give a faci-

* Mr Drummond's Evidence before the Roden Committee, contained in Part III. of "Minutes of Evidence taken before the Select Committee of the House of Lords, appointed to inquire into the State of Ireland since the year 1835, in respect of Crime and Outrage, which have rendered Life and Property insecure in that part of the Empire, and to report to the House."—Ordered by the House of Commons to be printed, 2d August 1839.

lity for the perpetration of outrages which does not exist in other places; but if such outrages were planned in the society, I have no doubt we should be far more successful in detecting them. A member of the society who meditates an outrage from motives of private resentment will apply, after the manner of the county, to his neighbours for assistance, and he will feel a greater security from their being bound together by a secret oath that they will not betray him. This tends, no doubt, to the commission of crime; and for that reason, with others, the Government have all along considered it to be a matter of the utmost importance to put down such societies, no matter what their objects might be, whether agrarian, political, or religious; and they have felt it a paramount duty to put forth every possible exertion for that purpose. The chief difference between the outrages in the Riband and the other counties consists in this, that in Tipperary [for example, where there is no Ribandism], it is usual specially to swear the participators in each particular outrage of any considerable magnitude immediately before they set about it. The man who has an outrage to commit selects his party from those whom he thinks he can trust, and they bind themselves to him and to one another by an oath; therefore I do not perceive any material difference between an outrage committed in that way and one committed by Ribandmen bound by the general oath of their society. It is not proved that in the Riband counties the outrages are committed by persons from a distance. In all those cases in which we have been able to bring home the charge we find that the perpetrators are persons from the neighbourhood."*

Mr Drummond thought it highly probable that Ribandism had its committee-men, parish masters, and so forth; as its object—the collection of money in exchange for termly passwords—could not otherwise be effected. He did not believe, however, that there was any central board forming a link between the various societies, or that any person of consequence was at the

* Mr Drummond's Evidence before the Roden Committee.

head of Ribbandism. Supposing the societies to exist for political objects, he had the meanest opinion of their power to effect them.

"Having read carefully every information that has been transmitted to the Government—having seen that those societies are composed of the very lowest of the people; and, as far as the information goes, not only that there is no man of note connected with them, but scarcely any respectable person of any class in society,—knowing that they are denounced publicly and constantly by the Roman Catholic clergy, and continually, fearlessly, and powerfully assailed by the very man [O'Connell] whose elevation they profess to have in view,—I think it is impossible to doubt that their power of effecting any political object, supposing them to have such in view, is utterly despicable. Their organisation is not at all adequate to such an object [as turning out at a few hours' notice on leaders appearing to head them]. I believe, if they were to turn out, they would fall instantly to pieces like a rope of sand—that they would disperse almost before the means [of putting them down] possessed by the Government could be brought to bear upon them. Their organisation is not perfect enough to enable them to turn out, or, if turned out, to keep them together. There is no evidence that they have any arms; the evidence is, in fact, against that supposition; nor is there any person even of respectability to place himself at their head. I cannot conceive that such a body of men would not immediately be dispersed. No danger to the public peace could flow from them—I mean danger of any duration. They might, perhaps, make a temporary disturbance."*

The outrages which had their origin neither in Orangeism nor Ribandism were of two sorts. They were properly Agrarian, connected with evictions which, at the time, were numerous, the country being in a state of transition from the results of subdivision to the system of large farms; or they were connected

* Mr Drummond's Evidence before the Roden Committee.

with Faction Fights, which sprung from the family and clan feuds of the Catholics. On well-understood occasions, such as holidays or fairs, the people in the South and West of Ireland turned out and fought with one another in factions. As many as 3000 were sometimes ranged on each side in these conflicts, which were commonly permitted to pass unnoticed by the Government. It had been considered hopeless to attempt to check them. The policy corresponding to this despair was "to let the people fight it out," which some justified on the ground, that so long as they fought with one another they could neither fight with nor plot against the State.

It was the policy of the Normanby Administration to deal vigorously with all those sources of social disorder. They resolved that nothing should be left undone to remove such copious springs of ruffianly feeling in the people. In carrying out this policy, most important changes had to be effected in the police and magisterial establishments.

The whole of the agencies for repressing crime in Ireland in 1835 were in a high degree inefficient. The police were inefficient, partly from defects in their organisation, partly because they had never been properly handled. Criminal prosecutions were mostly left to be carried on by the injured parties. There was an indisposition to prosecute, due to the same odium attaching in Ireland to a prosecutor as to an informer. There was a general indisposition to give evidence, and there were no means of dealing promptly with unwilling witnesses. There was no general and sufficient Crown agency for the preparation of cases for trial. In consequence, commitments were few in proportion to crimes, trials in proportion to commitments, and convictions to trials.

A police force had been established in Ireland as early as 1814, under the name of "The Peace Preservation Force." By an Act passed a few years later, this force assumed a regular form, under four provincial inspectors. The men who composed the force were excellent; on their efficiency as a constabulary, however, there were several drawbacks. The force was unpopular, because the men were all Protestants. Being under four heads, it wanted vigour and unity of action. The men had no prospects of promotion to spur them to zeal and activity; the grades in the service were few, and all the higher posts were in the patronage of the Lord-Lieutenant. Moreover, such as the force was, it had never been properly handled, or its capabilities properly tested. This was, perhaps, the principal cause of its inefficiency. In the hands of Mr Drummond it became almost at once equal to the performance of duties formerly considered to be altogether beyond its powers.

In the division of labour in Dublin Castle, the control of the constabulary was left to the Under Secretary, even when the Chief Secretary was in Ireland.* In this field, then, Drummond appears as a principal. "He found the constabulary in a very inefficient state," says General Larcom. "By his power of organisation and administrative skill, he converted it into the most efficient police in Europe. It became under his hands an almost perfect machine, which, like a delicate musical instrument, responded at once from the remotest part of Ireland to his touch in Dublin Castle."†

* See 12,171 "Report of the Roden Committee."

† The Irish constabulary evoked the admiration of Sir Charles Napier, of Scinde, during a visit which he paid to Ireland. General Larcom remembers that, launching forth in admiration of the constabulary and of Drummond's powers of administration, he declared him "just the sort of man that was wanted to govern India!"

Before he was a month in the country, the state of the police force in Dublin made plain to Drummond the necessity of its being remodelled. He thus describes that force:—

"The condition of the Dublin police in 1835 was most wretched. It consisted of a small number of day police, having an establishment of peace officers somewhat similar to the old establishment of the metropolitan police offices, and a considerable number of watchmen—decrepit, worn-out old men. For the purpose of a day police the watchmen were absolutely inefficient; in fact, it was impossible to produce them. In the month of August 1835, there was a large public meeting to be held in the Coburg Gardens, and it became my duty to consult with Alderman Dailey as to the means of preserving the peace. He mentioned the small body of day police he had as being totally inadequate to the occasion. I suggested that he should bring out his watchmen. He said, 'Oh, it will not do to call out the watchmen; they will excite so much the ridicule of the people, that there would be a risk of their very appearance creating a disturbance. It will not do to show them in daylight.' [Immediate action was taken to remedy this state of matters.] A bill was introduced in the Session of 1835; it passed the Commons, but did not pass the Lords. It was reintroduced in 1836, and passed; but considerable difficulties arose in providing sufficient funds, and before these could be removed and the necessary preparations made, a considerable time elapsed, and an amendment to the Act became necessary, so that it was not until January 1 38 that the [Dublin] police was in operation. The effect of the change was to give 1000 able and effective men for Dublin and a certain district round it. The former force numbered between 400 and 500 men, underpaid, miserably clothed, old, and inefficient. It is impossible to have a more efficient police than there is now [1839] in Dublin; and that, I believe, is the opinion of the people. I refer to a report to show the state of the Dublin police previously to the change. One passage which I should like to read shows the former state of the town in regard to

combinations. It is one of the annual reports of the Magistrates before the establishment of the new force. Combination assaults had become so frequent at that time that they took place in the broad daylight, and, in some instances, in the crowded streets of the town :—'There is one circumstance which characterises the year 1837 which deserves particular notice, and that is the sudden growth and extension of the offence, indicated by the increase during that year of the number of persons charged with combination outrages, from forty-four in 1836 to ninety-seven in the latter year. The impenetrable secrecy with which a combination transaction is carried on, from the first inception of a hostile design against an individual to the execution of the dreadful sentence of *slating* [*i.e.*, knocking a man down with bludgeons and beating him]; the inhuman severity of that infliction; the address with which the assailants congregate at the spot of mischief without exciting alarm, or even attracting attention; the suddenness with which, by a well-concerted simultaneous attack, the slating is performed; the easy escape of the criminals while the victim is prostrate, and perhaps insensible, and the attention of passengers, if any there happen to be, engrossed by his perilous situation; the difficulty of discovering, arresting, bringing to trial, and convicting the guilty persons, will, we trust, excuse us to his Excellency, if we suggest the necessity of legislative enactments in aid of the law as it now stands.' In the first half year after the introduction of the new police, there were only two combination assaults, and nine out of twelve of those engaged in them were apprehended. In a year the number of these assaults was reduced from ninety-seven to eight. The new police finally put an end completely to these outrages."*

At the same time that the Dublin Police Bill was introduced in the session of 1835, there was also proposed a general Irish Constabulary Bill, prepared on the basis of one that had been drawn up under the Chief Secretaryship of Mr Littleton. This bill passed

* Mr Drummond's Evidence before the Roden Committee.

the Commons in that session, but was rejected by the Lords; whereby, says Drummond, "the benefit which would have been derived from a more efficient and a more perfect force was postponed for a whole year." The same bill was reintroduced in 1836, and passed with some alterations.

In the meantime Mr Drummond addressed himself with the force at his disposal to the work that fell to be done. He had almost suppressed the faction fights before the new police became available:—

"The first successful efforts to put down the faction fights were made at the end of 1835 and in 1836, previously to the passing of the Constabulary Act, and may be ascribed to the action of the Government on the constabulary. A remarkable instance of this occurred at ——. A report, dated in 1835, from the chief constable of the district, states:—'On Wednesday, the 9th, the fair-day of the village of ——, two hostile factions, the Curtins against Connorses, assembled to disturb the public peace. They were in number about 500 at each side, and remained on two hills convenient to the village up till five o'clock in the afternoon, at which hour and previously business was suspended, when the military and police were ordered to their quarters, all being peaceable. The Connorses paraded the village different times, after the authorities left the spot, to the number of about twenty, armed with blunderbusses, guns, and pistols; and several shots were fired convenient to the village by both parties.' Cases of this kind were of common occurrence previous to Lord Normanby's time, and the constable's report shows he did not consider it extraordinary. It was common to receive reports of the assembling of such factions, without at the same time hearing that the constabulary had made any efforts to prevent their taking place. A report from the same place, in May 1836, was as follows:—'I beg leave to report to you that yesterday evening, the fair-day of the village of ——, a large, riotous, and tumultuous party of men, the "Four-years-old," numbering about 350, about forty of whom were armed with blunderbusses, guns, and pistols, paraded

through the village different times, firing shots, and crying out, "Here is 'Four-years-old!'" They afterwards, late in the evening, went into a grove convenient to the village, where they took refreshments, liquor and bread, and again returned to the village, firing shots. There were from 70 to 100 shots fired. In consequence of the opposition faction (the "Three-years-old") not appearing, there was no riot between them, but there were some persons beat; however, there was no person dangerously wounded. . . . I should not omit stating, that previous to the fair-day, and up to the hour of six o'clock yesterday evening, there was not the most distant rumour of the intended outrage; not one single hint could be got relative to the matter. I had some days previous been on the alert, but could not learn anything of the rioters intending to meet at the fair.'"*

The way in which the Government acted on the police may be seen from the minute made on the last report by Drummond, in the absence of the Lord Lieutenant:—"This occurrence is discreditable to the police. The constable will state—*Why he was on the alert several days* previously? What force he *assembled* at the fair? What force he might without difficulty have assembled at the fair? How near is the nearest military station to the village? And he will further state whether forty men armed with blunderbusses, guns, and pistols, could have entered the village unknown to the police if the police had been doing their duty. When did this riot begin? When did the party proceed to the grove? How long did they remain there? Was there time to have sent for a reinforcement of constabulary or military? Was their intention of returning unknown to the police? Were any steps taken with a view to identifying any of them? Have any since been taken? The police appear to have been utterly useless on this occasion.

* Mr Drummond's Evidence before the Roden Committee.

Let the chief constable give L.10 for such information as will enable him to bring any one of these rioters to justice (L.10 per head), and let him well and fully understand, that he is expected to use more diligence and show more intelligence in bringing these offenders to justice than he has done to prevent the exhibition, so disgraceful to the police, of a village being in the possession of a band of armed ruffians. Why is the number of persons injured not reported, and the injuries which they have received not stated?"

The result of this minute, followed up a few days after by another, was that the chief constable and sub-inspector set actively to work to bring as many of the offenders as they could to justice. Twelve persons were apprehended and convicted; the Crown solicitors having, meanwhile, been urged to spare no pains or expense to procure proper and sufficient evidence against them. The effects of this vigorous policy were quickly felt. By August 1836 a sub-inspector reported that he was now convinced that the suppression of fights at fairs and faction riots, which he had formerly considered impracticable, could be easily accomplished:—"There is no doubt, if the business be well followed up for a sufficient time, these disgraceful riots will presently be put a stop to." The business was well followed up. "I ought to mention," says Drummond in his evidence, "that it was a practice at one time not uncommon, to draw the police from the fairs, with a view to prevent collision with the people; and when the order that they should attend was given, I received a representation from Sir John Harvey, the provincial inspector of Leinster, begging that the subject might be well considered before that order was sent out, for he felt that very serious consequences might result from it, the policy having been to

withdraw the men out of sight, and leave the people to fight among themselves unrestrained, rather than risk the loss of life by collision with the constabulary." The consequence of this remonstrance was the issuing of a general order, in the beginning of 1836, for suppressing the riots and faction fights. In June 1836 the substance of the series of minutes written on the different cases that had occurred since Drummond became Under Secretary were embodied in a general order to the constabulary by Colonel Shaw Kennedy, who then became Inspector-General of the Constabulary created under the new Act.*

* It should be mentioned that Colonel Kennedy, the Inspector-General, and more especially Colonel Miller, one of the provincial inspectors, rendered important services in regard to the internal arrangements of the constabulary force. Colonel Kennedy, being asked in his examination before the Roden Committee, "Was there any other description of offence on which you remarked that the improved organisation of the constabulary force had had a good effect?" answered—"That question seems to me to imply that I wish to convey that the improvement of the constabulary force under me had the effect of putting down those faction feuds; on the contrary, I say that the constabulary force was very efficient in putting the orders of the Government into effect; it was the orders of the Government which caused their being suppressed. I do not assume that there was any greater efficiency which I caused in the constabulary force, but the merit was in the Government ordering the thing to be met." Elsewhere he says—"The steps taken with reference to the organisation of the police by Government for the suppression of the faction feuds, were that the chief constables were directed to report every case of an anticipated faction feud, and every case of a fair or meeting at which a faction feud was likely to take place; and instructions were given to collect a sufficient constabulary force to meet the occasion, the magistrates to attend and to proceed against the parties vigorously. It was thought (and thought by a great many of the constabulary force) that the thing could not be done; but when the factions were fairly met, and were taken up and punished, it was found to go down very rapidly, and did go down very rapidly."

Under the Act of 1836 the police force was put under an Inspector-General, who, having an office in Dublin Castle, was in immediate communication with the Government. The correspondence between the head-quarters in Dublin and the constabulary officers in different parts of the country was simultaneously accelerated, and means afforded of creating a better description of officers. The selection of the men was vested in the Lord Lieutenant, and practically in the Inspector-General, instead of being, as previously, in the hands of the local magistrates. Constabulary courts were established for the enforcement of discipline. The discipline of the corps was, at the same time, made more strict and systematic. The Act of 1836 further provided for the appointment of a number of stipendiary magistrates, to fulfil in Ireland functions similar to those discharged by the sheriff-substitutes in the counties of Scotland.

Most material improvements in the force, not provided for by the Act, were introduced by regulation, and by the general order, already referred to, which embodied the substance of the Under Secretary's minutes. The effect of these improvements was to give the force a quasi-military organisation; the constables, it is well known, are armed and equipped like regular troops. Military officers were introduced into the corps to raise its character. To stimulate the members of the corps to exertion the Lord Lieutenant surrendered his power of patronage to a great extent, and established the rule of promotion by merit, as, on the whole, the rule of advancement within the force. The head of the constabulary was now the Inspector-General; under him were the four provincial inspectors; under them thirty-five sub-inspectors, with salaries varying from

L.230 to L.250; next to them the chief constables, in three classes, with salaries of L.150, L.130, and L.100 respectively; next to them the head constables, in two classes, receiving severally salaries of L.70 and L.50; and then the constables and sub-constables, each in two classes, with salaries of L.32, L.28, L.25, and L.23. "The effect of these several regulations may be rendered more intelligible," says Mr Drummond, "by comparing the constabulary force with a regiment. The head constable may be considered as somewhat similar to a sergeant-major, and the chief constable to an ensign. It was very desirable to show the men that there is nothing to prevent them rising to the higher classes if they possess the requisite qualifications. The result of this system will, I hope, be that the constabulary force will be unequalled by that of any other country." The strength of the force was increased at the same time that its organisation was improved. In 1839 it numbered 8416, being 1300 more than in 1835. A design of Drummond's was to create a reserve of about 400 men, to be placed in a depôt in Dublin, at once as a training school for the force and as a reserve at the disposal of the Government in cases of emergency. "This," he says, "is almost the only thing wanted to make the force nearly perfect."

The admission of Catholics in considerable numbers into the constabulary, with a view to increase its popularity, and consequently its efficiency, was a point on which Drummond strongly insisted. A great number were admitted to every rank in the service. This recognition of Catholic emancipation in a small matter gave great offence to the Orange party, who saw in it infinite danger to life and property. Mr Drummond was examined before the Roden Committee at consider-

able length on the policy of this course, *apropos* of the appointment of a Mr Slattery, brother to a Roman Catholic Archbishop, to an office in the force. His evidence is worth quoting as the only public expression of his views on the relations which should subsist between religions and Government:—

"Do you consider it advantageous to introduce into the force persons so connected?

"I do.

"Would you, under such circumstances, have considered his age a decided objection? [Mr Slattery was over the regulation age.]

"I think that it is so desirable to introduce a person so connected into the force that, supposing the appointment rested with me, I should have been disposed to set aside the rule in regard to age in such a case.

"Because he was connected with a Roman Catholic prelate?

"Yes.

"Do you mean to state that it would be better for the character of the service to lay aside the regulation of the service, and to admit a man into the service, because he was a brother of a Roman Catholic priest?

"I do not allude to any regulation but the regulation of age. Supposing he had been three or four years above the age fixed by regulation, I think it would have been advisable to depart from that regulation, for the sake of introducing a relative of a Roman Catholic prelate, like Dr Slattery, of great influence from his character and station.

"Will you point out to the Committee what the particular advantage would be in introducing a brother of the Roman Catholic Archbishop into the constabulary?

"I think it tends very much to render the force popular, and by rendering it more popular, it is able to perform its duties much more effectually.

"In the case of a brother of a Bishop of the Established Church, would you think it of equal advantage that the regulation should be departed from?

"I am speaking with reference to a Catholic population. If it was a Protestant population in similar circumstances, I should come to the same conclusion with regard to a relation of a Protestant Bishop.

"Then it is because the force happens to be connected with a Catholic population, that you think it an advantage?

"Yes.

"Then, in a Catholic population, you would prefer having a Catholic police to a Protestant?

"Yes. But if only a partially Catholic population, I should not.

"Where the greater preponderance of the population was on the side of the Roman Catholic religion, you would in general appoint Roman Catholic policemen?

"I would leave the service completely open to applicants of either creed; but I think it would be desirable that a large proportion, both of officers and men, should be Roman Catholics. The proportion of Roman Catholics among the officers is at present decidedly much smaller than of Protestants.

"You think it would be better to correct that?

"I think it would be advisable to correct that.

"Supposing these principles carried out, do you think that persons of property would have the same reliance on the police that they have now, they being generally Protestants?

"I feel persuaded that in the course of six months, from the manner in which the police would do their duty, they would have that confidence. A prejudice would have to be overcome; but the more considerate, seeing how the police discharged their duty, would be soon satisfied."*

After the new Act and regulations came into force, Mr Drummond continued to retain the active management and superintendence of the constabulary. In dealing with the factions his policy was to accumulate the police in such strength, at the point of expected conflict, as to put resistance out of the question. The

* Mr Drummond's Evidence before the Roden Committee.

result was that they usually dispersed the factions, and arrested the ring-leaders without opposition. The stipendiary magistrates introduced by the Act greatly facilitated the effective employment of the force. The efforts of the constabulary were also aided by a clause inserted for the purpose, in the Spirit License Act of 1836, which gave the magistrates the power of clearing, at an early hour, the booths at fairs. In 1838 the Inspector-General of the force, dissatisfied by his subordinate relation to it, threw up his office. One of his complaints was that the stipendiaries, whose numbers under the Police Act were increased from twenty-nine to fifty-four, did not correspond with him, but with the Under Secretary, whereby the practical control and disposal of the force was taken out of his hands. On some occasions he was unaware of the movements of the police till he received reports of their having executed the orders of the Government.

The Orange processions were dealt with as vigorously as the faction fights. There was a difficulty, however, in dealing with them, due to the apathy or partiality of the magistrates, who for years had allowed them to take place with impunity. This was one of the chief reasons why Drummond longed (as appears from his correspondence) for the stipendiaries proposed to be appointed under the Police Bill. He saw that but little could be done against this species of disorder until he had at his disposal a body of magistrates acting as officers of the Government. There was another reason why he longed for the stipendiaries,—the mal-administration of justice in the Petty Sessions. The people had no confidence in their judges. When they came from a distance to attend the court, there were frequently no magistrates in attendance to form a court, and they

had to travel home again. "Rumours of an alarming nature from the other side," writes Drummond to his mother in July 1836. "Lord John Russell and the Radicals have quarrelled about the English Church Bill. I think the Radicals are right. They are too often right, which is our fault. Here we go on prosperously, and I should anxiously desire to have another year, because, I think, in that time we should have reaped a part of our harvest, and that we should begin to feel the salutary influence of the stipendiary magistrates about to be appointed. Grossly have the local magistrates abused their power, in many, very many instances; but their wings are clipped, and I hope and believe there is some chance of justice being better administered soon, and ultimately of being well administered. The confidence of the people will be regained; though given to the Government, it is still withheld from their local courts, and no wonder. The courts are now improving, however, and the new appointments will have a powerful effect."

As fruits of the activity of the Government against the Orangemen, there lay in jail in February 1836 a great number of persons awaiting trial for taking part in processions. The declarations then made by the Orange leaders of their intention to dissolve their lodges was made the occasion for an act of clemency. The assizes were sitting at the time, and the Crown solicitors were directed to forego all prosecutions for this offence, except where the parties were charged with violence or other criminal conduct. Many prisoners were accordingly admonished and dismissed. This clemency was, however, thrown away. Information having been received through the constabulary that meetings were apprehended in a variety of places on the 12th of July

1836, troops and parties of police were sent to these places, under the direction of stipendiary magistrates, who were moved for the occasion from other parts of the country. Twelve troops and a half of cavalry, thirty-four companies of infantry, and thirty-three stipendiary magistrates, were thus employed. Similar exhibitions of force on the part of the Government were required, though on a less scale, in 1837 and 1838. In the last year nine troops of cavalry, five companies of infantry, and sixteen magistrates sufficed. By these measures the processions were in many cases prevented; and great numbers of those who took part in them were arrested, brought to trial, and punished. In three years the processions were practically suppressed, though in some districts it was still necessary to watch, and be prepared for the movements of the Orangemen. Those who took part in these processions were mostly farmers and labourers; but they were countenanced by many in superior positions, and, in one instance, in Monaghan, in 1838, were headed by landed proprietors, near relatives of a local magistrate.

The Orange party considered the employment of the stipendiaries to be a slander on the local magistrates. But the facts seem to have fully justified their employment. The reasons usually assigned by the Government for the appointment of a stipendiary to any district were the prevalence therein of outrages, the frequency of faction fights or of party processions, or the want of resident magistrates. There was at least a studied desire to avoid the unpleasant truth in the grounds of these appointments. The truth, however, may be inferred from a single fact. In June 1837, Drummond directed a circular letter to all the local magistrates, requesting that they should use every

means to prevent processions, and should transmit such information as they might receive of the intentions of the Orangemen to assemble in defiance of law. To this letter no answer was received in a single instance. The stipendiary magistrates had to be employed to obtain the necessary information. A phrase in the circular gave great offence to the Orangemen, and was afterwards referred to as the reason why it was not answered. Drummond designated those who might intend processions as "evil disposed persons," by which he was said to have prejudged their case. He had to justify the phrase, before the Roden Committee, as rightly applied to those who meditated processions after the warnings and the clemency of the Government. The stipendiaries were either barristers, or experienced military or constabulary officers. Men were required who could administer justice, and men who could enforce order; and it was not easy to find the qualifications for the double duty in the same persons.

We have now seen the improvements effected in the police, and the good effects of the vigour of the Government. The police form, however, but one branch of the governmental machine for the repression of crime and disorder. They can only operate as a physical force to prevent disorder by direct anticipatory interference, or by the apprehension of those guilty of overt criminal acts. It is on the criminal courts, the machinery for the prosecution, conviction, and punishment of offenders, that the main reliance must be rested in spreading and maintaining respect for, and terror of the law. At the same time, then, that the efficiency of the constabulary was increased by tonic treatment and a new organisation, the whole of the prosecuting and magisterial agencies in Ireland were remodelled and invigorated.

A great improvement was made in 1835 in the prosecution of offences at Quarter Sessions. It was formerly not the practice to prosecute in these courts on the part of the Crown, unless in very special cases, directed by the Attorney-General. In 1835 sessional Crown solicitors were appointed to conduct the prosecutions in every case.* The appointment of these solicitors secured the effective prosecution of a very large class of cases, chiefly assaults, arising out of riots at fairs and other assemblies of the people, which were formerly prosecuted by the parties themselves, or, as was much more frequently the case, were compromised before trial, and not brought to justice at all. The effect of the change was, in some parts of the country, at once very remarkable.

The Crown prosecutions at the assizes were simultaneously greatly extended. This extension had been begun under former Governments. Previously to 1821 the Crown prosecuted only in cases of an insurrectionary nature. The worst description of homicides, and even of murders from private causes, burglaries, robberies, &c., were left to the prosecution of the injured parties themselves; and, in consequence, the prosecutions often failed from the neglect of proper preparations.

At the same time that the Crown prosecutions were extended, arrangements were devised for making them more effectual. Those arrangements are thus referred to in Mr Drummond's evidence before the Roden Committee:—

"I may be permitted to advert to an arrangement which

* This was an imitation of the Scotch system of Procurators-Fiscal, which was well known to Mr Drummond. We shall see presently that an imitation of the Scotch system on a larger scale was of his suggestion.

Lord Normanby directed among those other arrangements I have already described, and from which very considerable benefit is expected as regards the suppression of outrages. The plan in question is one for rendering Crown prosecutions more effectual. Lord Normanby's attention was directed to this important subject soon after he became Lord Lieutenant, and it appeared to him that considerable improvements might be made in the manner of conducting these prosecutions, both at assizes and quarter sessions. A measure, begun with this view before he left Ireland, has subsequently been completed, and has received the sanction of his successor. From this measure great benefit is expected; it will secure the immediate attention of the Crown solicitor and Crown counsel to every case as it arises; and it is expected that cases will be got up much more completely than they now are, and that the consequence will be a larger proportion of convictions. The proposed measure regards the conduct of both the civil business and the criminal business, but the latter more especially. It is now completed, and is about to be submitted to the Treasury.

"Did this suggest itself after Lord Normanby went to Dublin?

"Yes.

"About what period; in 1835?

"It was talked of in 1835, and was postponed in consequence of the necessity of preparing the Constabulary Act and other legislative measures.

"Did you suggest it?

"I, of course, brought under the notice of the Lord Lieutenant certain defects in the present system which fell under my cognisance."

There was another change made which had a most beneficial effect on the administration of justice. Prior to 1835 it had been the practice of the Crown to set aside, from the list of persons appointed by the Sheriff to try causes, all who were Roman Catholics, or of "liberal opinions." They were challenged or "put by," according to legal phraseology, and not

allowed to sit as jurors when called. This was done in virtue of an assumed right of peremptory challenge in the Crown, which, however, it appears, did not belong to it otherwise than through usage. The effects of the practice, whether it was legal or not, were highly prejudicial. The people were never satisfied of the impartiality of the tribunals. It enabled the friends of a convict to excite a sympathy in his favour, no matter how properly he might have been convicted; for they would point to some gentleman who had been challenged by the Crown, and prevented serving on the jury, and say, that if it had been a fair case such a gentleman would not have been put off the jury. The abandonment of this practice was one, and not the least, of the good consequences of the new regime. It was initiated in 1835 by Mr Perrin, who had previously for years discountenanced the practice; it was carried on and completed by O'Loghlen and his successors in the Attorney-Generalship—no doubt, in consultation with, if not under the directions of, the Government. Full instructions on the subject, issued by Mr Brady when Attorney-General, have been acted on ever since.* The effects of this change, of course, extended beyond the sphere of the administration of justice. "Throughout the island," says Miss Martineau, "the Protestants, who had always regarded their neighbours of another faith as idolaters and rebels, saw with amazement and horror that they were trusted to try the accused, to administer the laws, and transact the business of society, as if they hated the Pope and cursed the Jesuits."†

An important change was also made, in 1836, in the law respecting Petty Sessions. A return was ordered to be furnished quarterly, showing the number of Petty

* See App. No. III. † "History of the Peace," vol. ii. p. 285.

Sessions held, how they were attended, and what business was transacted. The Government was thus put in possession of information as to the proceedings in all the Petty Sessions in the kingdom, and could see where they were well attended and where they failed. Where the magistrates failed to attend to their duties, the failure was at once known, and the attention of the Lord Lieutenant of the county instantly drawn to it by the Government. The Lord Lieutenants of the counties generally responded to the call of Government, and, with one exception, undertook to see to the regular attendance of the magistrates.

These changes were accompanied by sharp measures for compelling the attendance of jurors, witnesses, and parties bound over to prosecute. "There is a general feeling," says Mr Drummond, "against a person who gives evidence in a court of justice in Ireland. The name of an informer or prosecutor exposes him to general odium—in some instances even to personal risk. Under the old system, the defaulter was fined, but the fine could not be levied at the time. It was levied under a process issuing from the Court of Exchequer. The defaulter apprehended on this process lay in prison till the next assize. Under the new system, the judge fixes the fine and hands at once a warrant to a constable to apprehend and bring in the defaulter."

These changes were accompanied by legislative remedies for some evils which were fertile causes of disorder. Both the evils below referred to were remedied in 1835.

"Formerly each judgment creditor had the power of distraining for the amount of his debt. This power was most vexatious, and led to frequent breaches of the peace. Each

creditor had, without reference to what had been previously paid by the tenant, the power to distrain for his debt; so that it frequently happened that the unfortunate tenant had two or three times over to pay the amount of his rent. [The holder of a small portion of potato ground, having paid his rent to the man of whom he hired it, not being the landlord, but a tenant, might be called upon, as the actual occupier, to pay his rent over again to the landlord; and this as many times as there were intermediate tenants between himself and the owner of the land.] The natural consequence was, he resisted; and that led to breaches of the peace. The improvement introduced was, that a Receiver was appointed by the Court, who received the amount and paid it among the creditors. There was another important change which tended to prevent breaches of the peace. This was the granting to the Civil Bill Court a power to substitute service of process, as it was called, *i.e.*, on the party making a representation that the service has been opposed, the barrister may direct the posting the notice on some conspicuous place, which shall be deemed good service. This prevented collisions between process servers and the parties—of old a fertile source of disturbances."*

The effect of all these improvements appeared in the diminution of crime. The criminal statistics adduced by Mr Drummond before the Roden Committee established three propositions. *First*, that there had been a diminution in the amount of aggravated crime, while the total amount of crime of all sorts brought to justice was as great as ever; *secondly*, that there had been an increase of committals, in proportion to offences, consequent upon the superior vigilance of the police; and *thirdly*, an increase of convictions in proportion to com-

* Mr Drummond's Evidence before the Roden Committee. The merit of procuring the substitution of service of process belongs to a lay association established in Dublin in the end of 1835 for the purpose of helping the clergy. The change had its origin in the difficulties of the tithe collection.

mittals, consequent upon the *greater facilities afforded for the administration of justice.* He showed that, taking the mean of crime for the years 1826–1828, and comparing it with the mean for the years 1836–1838, and allowing for the increase of the population, there had been a decrease as follows:—

	Decrease.
Murder and manslaughter,	10 per cent.
Shooting and stabbing,	46 „
Conspiracy to murder,	29 „
Burglary,	56 „
Assembling armed and appearing armed by night,	26 „
Housebreaking, &c.,	86 „
Stealing cattle, horses, sheep, pigs, and calves,	34 „
Assaults with intent to rob,	54 „

There was an increase of common assaults, riots, breaches of the peace, misdemeanours, and larceny; but with regard to these, Mr Drummond showed that the increase was directly ascribable to the increased activity and efficiency of the police. How this appears may be seen in regard to the head, riots, &c. "This includes," he says, "all those offenders who are arrested at fairs, markets, &c., for disturbing the public peace; and as those arrests are now made with a vigour unknown in former periods, every fair and market being latterly attended by the police in force, whereas, formerly, the police were either withdrawn from fairs and markets, or did not take the active part they now do in arresting offenders, it is manifest, looking to the great number of fairs in Ireland, that the number of offenders of this class committed to prison must be greatly increased. If it were not, the fact would show that the police had not acted up to the orders they had received."

He concludes:—

"The fact which has thus been shown of a decrease in the aggravated crimes, and an increase in the minor offences, is

illustrated very strikingly by what has happened in Dublin since the establishment of the new police. Burglary has diminished from 54 to 38; combination assaults (the worst description of assaults), from 95 to 8; horse and cattle stealing, from 31 to 15; infants exposing, &c., from 38 to 26; murder and homicide, from 16 to 5. There was not, I think, one case of murder, but the two denominations of crimes are thus classed together in the returns. The homicides generally rose from frays between hostile parties. Riot has decreased from 95 to 29; highway robbery, from 16 to 9. An increase, on the other hand, appears in larceny, from 5710 to 6101; misdemeanours and trespass, from 2408 to 3666; the number of persons taken up for disturbing the peace, from 4986 to 9720. The increase in these minor offences is directly ascribable to the vigilance of the police. Looking at the fact, then, of the constabulary having been rendered more effective, and looking to Dublin as illustrating what has taken place in a less degree throughout the country, I think it is impossible to come to any other conclusion than that the state of the country, as regards crime and outrage in the years 1836–38, is very satisfactory as compared with its state in 1826–28. It will further be recollected that, with respect to that class of the people from whom the criminals chiefly come, there is no reason to believe that their condition has improved. That was one of the points to which the Railway Commissioners (of whom I was one), had to turn their attention, and the result of our inquiries was, that while there was a great increase in the commercial transactions of the country, the condition as to comfort of the class of the peasantry had not been improved; indeed, I should rather say, it had been deteriorated. Taking all these things into consideration, namely, that the condition of the people of that class has not improved, that serious crimes have diminished, and that a greater number of minor offenders have been made amenable through the vigilance of the police, and farther, that there is an increase in the proportion of convictions to committals, it appears to me impossible to come to any other conclusion (if the numbers be correct, as I have taken some pains to see that they are), than that the state of the country

in the latter period is very satisfactory as compared with the former."*

The only subject connected with the action of the Administration on crime, that remains to be disposed of, is Ribbonism or Ribandism. In moving the commission of inquiry which evoked this evidence, Lord Roden had insisted, with great emphasis, on the magnitude, systemisation, and treasonable objects of the Riband conspiracy in Ireland. He said—"The subject to which he would now call the attention of their lordships is that of a conspiracy in Ireland—a conspiracy systematic, organised, and secret, and which is directed

* Mr Drummond's handling of criminal statistics shows the value of scientific education as a preliminary training for political and social inquiries. The present writer was led, in 1856, to examine somewhat strictly the statistics which are commonly relied on as indicating the variations from time to time in the amount of crime. The results he arrived at will be found briefly stated in the article LAW (Section on Jurisprudence) in the 8th edition of the "Encyclopædia Britannica." A more elaborate exposition of these results will be found in a paper, also by the present writer, on "Scottish Criminal Statistics," p. 384 of the "Transactions of the National Association for the Promotion of Social Science, 1863." When these papers were written, the author was unacquainted with Mr Drummond's examination of the Irish criminal statistics in his evidence before the Roden Committee. He now finds that in almost everything he had to say on the subject he had been anticipated by Mr Drummond. The statistics adduced before the Roden Committee fill upwards of 200 folio pages. They exhibit, as all criminal statistics ought to do, in order to be capable of interpretation, the whole of the agencies for repressing crime, their force (numerically), and the conditions of their efficiency from year to year of the period embraced in the inquiry. The Irish criminal statistics, which as now issued under the superintendence of Dr Hancock, are the only criminal statistics worth anything issued in the United Kingdom, had thus early assumed a shape in which the figures might give some indication whether crime was advancing or receding.

against the life and property of all who will not join it, and support the *treasonable* objects which its members have in view. The poor farmers, however anxious for peace and quiet they may be, yet, if they refuse to join this conspiracy, are visited at night, beaten, maltreated, and exposed to the greatest cruelties. . . . The objects and ultimate aim of the conspiracy are exactly the same as those of the Precursor Association, viz., *separation* from England, in which is involved the annihilation of the Protestant faith!" His lordship, at the same time, represented crime in Ireland as having attained a height unprecedented even in that country.

It has already been seen how improbable was his lordship's account of Ribandism, and how false was his statement as to crime in Ireland. We can contrast Mr Drummond's views founded on all the facts, with those of Earl Roden formed in ignorance or disregard of them. So far, it was true that the habit of secret combinations for illegal purposes belonged to the Irish—had become a second nature to them. There *were* Riband societies, though there was no general bond between them. In many districts, what was called Ribandism nowise differed in its effects from the Whiteboyism of the earlier times. Combinations of the miserable evicted tenants against the evicting landlords, or against the tenants who came to occupy the lands of which they had been dispossessed, were formed wherever evictions were being carried out, even in districts where there was not the smallest ground for suspecting the existence of Ribandism, properly so called. So, in districts where the Protestant and Catholic populations were mixed, and more particularly where they were evenly balanced, there was a permanent confederacy on each side against the other, the parties being

respectively designated Orangemen and Ribbonmen or Ribandmen. But these confederacies had no political objects, and were generally of social rather than political significance. Of the Riband societies, properly so called, organised with secret oaths and pass-words, Drummond's view, founded on a careful study of every fact known about them, was, as we have seen, that they were simply organisations, headed mostly by publicans, for swindling the common people out of their money. But, of course, it may be remarked that the capacity of the people for being swindled in this way implied popular discontentment, and readiness for insurrection on an opportunity presenting itself.

The Government had been specially charged with dereliction of duty in regard to these societies—a charge which Mr Drummond was resolved to rebut. His examination on this point commenced on the fourth day of his appearance before the committee, and was continued for four days. On the question being put, "To what extent has the system of Ribandism come to your knowledge?" he said, "I have with me every case of Ribandism that has come under the notice of the Government since 1835, and I should wish to mention, that if any suspicion exists on the mind of any member of the committee that the Government has neglected to take every possible precaution, or to make every possible exertion to put down the societies distinguished by the name of Ribandism, I would beg permission to go, step by step, through every single report submitted to Government, in order to show the proceedings taken upon them." After consultation, and a number of general questions regarding the course taken by the Government, it was resolved to hear him on the details of every case that had arisen. With admirable clear-

ness and mastery of his subject, he then laid the cases and the whole actings of Government in connection with them before the committee, standing the fire of questions from the enemies of the Government with great calmness, and answering them with great ability. A single extract from the evidence may be given to illustrate the character of the Government proceedings:—

"I mentioned that the first case of Ribandism that came to the knowledge of the Government was that of a man who was apprehended in Dublin in 1835; but he appeared to be connected with Sligo, and not with Dublin. The first Dublin case occurred in 1837—I mean that was the first time a man was arrested with papers. It was known that there were two associations that were constantly engaged in fighting with one another—the Northerns or Widgeons, and the Billy Welters; but what their objects were, or whether they had any political objects in view, no precise information could be obtained. The magistrates seemed to regard them as two factions, whose main objects seemed to be to fight with one another. Previous to the establishment of the new police they were a constant source of violent disturbance in the city. In March 1837 a report was received, with the information of a man detailing the existence of an illegal body, styled the 'Sons of Irish Freedom,' who were stated to be in the habit of meeting in public-houses in the city, and to be composed of the labouring and working classes, to the number of 1500, sworn on their admission to keep down all Protestants, beat Orangemen, upset the King, &c. [On this information the law officers advised no proceedings to be taken.] The next case occurred in September 1837. It is merely the detail of a combination assault, as such assaults were called at the time. The parties committed an outrage and disappeared, and the police being very inadequate, no trace of them could be discovered. These assaults had grown to such a frightful extent about that time, that a public meeting was called in Dublin, the Lord Mayor presiding, upon a requisition set on foot, I think, by Mr O'Connell, who denounced at that meeting both the combinations of the trades

and the combinations of the Billy Welters and the Widgeons. Mr O'Connell made a communication to the Government at that time, that he had received information that a person had important intelligence to give respecting those societies. I saw that person, and he made a stipulation that he should not be required to communicate with any police magistrates. I was to see him alone, in secret, and at night. He came to me accordingly by appointment, and detailed much of that information which has subsequently been given by the police commissioners respecting those two societies. He told me of several outrages which he said were concocted at their meetings. I urged him, seeing that those outrages were committed almost daily, and as he belonged to one of the societies, to give me, as a test of the accuracy of his statements, information previous to the commission of an outrage, that the police might be able to arrest the offenders in the act. From that time to this, however, he has never given such information in any one instance, nor has any other among the many informants known to the Government given information which would enable the constabulary to take measures for the prevention of crime. I had a communication from Lord Morpeth, who was at that time in England. Parliament met in November 1837, and Mr O'Connell, who had taken a very leading part in denouncing these secret and illegal societies, waited on Lord Morpeth in London, and told him he had heard of another person who was prepared to give information. Lord Morpeth wrote to me in these words: 'O'Connell has just been with me, and brought me the enclosed. I need not talk of its importance. —— will call on you. Protection, personal and pecuniary, is what he wants to be guaranteed to him. I am sure you will be sparing of no effort to fathom and blow up this business. It is quite clear that the man is not exaggerating it for the purpose of magnifying his own merits.' I continued to see this man from day to day without any result whatever. His information was a mere statement of the names of persons alleged by him to be members of these associations. At that time there were outrages committed against Mr Guinness. I was in constant communication with this informer concerning

them; he declared to me that the persons committing them were in the very lodge to which he belonged; but, notwithstanding his repeated promises to bring to me information that would lead to the apprehension of these men, he never in a single instance brought information that would enable us to anticipate an outrage. Seeing this going on, I told him it would be necessary to put him in communication with the police commissioners, for I could not devote more time to it."

No practical results could be reached through the numerous informers who offered themselves at different times to the Government.* Many of them were discovered to be utterly worthless and infamous persons. One, who made a trade of playing informer, tried several magistrates in turn, and got money from them, before his true character was discovered. In another case, where an informer came forward as an accessory to a Riband murder, it was clearly established that his information was wholly false, and that he knew nothing whatever of the murder. Yet it was in reliance on statements obtained from persons of this class that Earl Roden founded his charge, and that one of the magistrates—a Mr Rowan—firmly believed in the Earl's Riband conspiracy. To this Mr Rowan every facility was afforded by the Government of following up the information he received, and on which he relied; but nothing ever came of his exertions. During the period 1835–39, the Government had examined into forty-five cases of reported Ribandism. They occurred in Sligo, Cavan, Louth, Meath, Wicklow, Leitrim, Tyrone, Mayo, Galway, Monaghan, Donegal, Dublin, Longford, and

* The "Spy" system, so abhorrent to so-called British feeling, is a necessary recourse of every government that has to deal with disaffection. It may be questioned whether it has in any country been carried to greater lengths than it has been, at times, in Ireland.

Westmeath. The cases in which there was such evidence procured as to justify legal proceedings were exceedingly few. In the others, there was little more than the statements of informers—generally one in each case—commonly not on oath, and given on the condition that the informer would not have to appear as a witness.

CHAPTER XVI.

IRELAND, 1835–1839; THE IMPARTIALITY OF THE GOVERNMENT; MR DRUMMOND AND COLONEL VERNER; THE BATTLE OF THE DIAMOND; REVIEW OF IRISH LEGISLATION; CLAMOURS OF THE ORANGEMEN AND TORIES; MR DRUMMOND AND THE TIPPERARY MAGISTRATES; "PROPERTY HAS ITS DUTIES AS WELL AS ITS RIGHTS."

We have now seen something of the spirit which animated the Normanby ministers. On the one hand, they put down the Orangemen; on the other, they, to the best of their ability, hunted down the Ribandmen. They put down the Protestant processions—they suppressed the Catholic factions—they removed causes of breaches of the peace—they punished offenders with a certainty never before attained. Criminals no longer went unpunished through defects in the prosecuting agencies, to the disgrace of justice and the demoralisation of the people. Witnesses were protected before and after trials till they became publicly recognised as citizens who were doing their duty to society. By steadily following this vigorous and even course the Government did more in a few years than could have been supposed possible to instruct the people in the true function of law, and to convince them of its being a blessing and not a curse.

Emancipation—outside the bounds of the rotten cor-

porations, and so far as it could be given effect to by the Executive—was no longer a mere name. Catholics were promoted to the highest legal offices, as they were admitted (to the disgust and affected terror of the Orangemen) to the lowest arm of the Executive—the constabulary. They were admitted to sit upon juries. On the other hand, the resolutions of the House of Commons regarding Orangeism were no dead letter, as similar resolutions had often before been allowed to become. Whoever in an office of public trust belonged to the mischievous society was promptly cashiered—great man or small, sub-constable or lieutenant of a county.*

This want of respect of persons was shown in a case which greatly exasperated the Ascendancy. It occurred in August 1837, by which time Drummond and his coadjutors in the Irish Government had come to be known as "The Apostles," on account of their devotion to the interests of the Irish.

Colonel Verner, Deputy-Lieutenant of the county of Tyrone, who represented the Orangemen of the Empire in the Commons during the investigation of the Fairman plot, gave, at an election dinner, as a party toast, "The Battle of the Diamond." To understand the significance of this toast, the reader should know that

* The following instances illustrate the disposition of the Government to extirpate the Orange Society: —"Mr Deane, a barrister, and most respectable gentleman, was elected Mayor of Cork; but on a memorial being addressed to the Lord Lieutenant, stating the Orangeism of Mr Deane, that gentleman was dismissed, and became an Orange martyr. So too Mr Smith, of Annesbroke, was refused a Deputy-Lieutenancy, to which he had been nominated by Lord Dunsamy. So also reputed Orangemen returned on the judge's list for the office of High Sheriff were passed over, and other names put in their places."—"Ireland and Its Rulers," part ii. p. 292.

a little hamlet, about five miles from Armagh, is said to be the birthplace of Orangeism; and that what is called the Battle of the Diamond was a conflict which took place at that hamlet in 1795. After the battle a few yeomen and farmers joined together for mutual defence and the assertion of British rights, and formed what is said to have been the first Orange Lodge.

The elections being over, Colonel Verner and the other magistrates who attended the dinner were favoured with the following circular letter from Mr Drummond:—

"DUBLIN CASTLE, *August* 22, 1837.

"SIR,—It appearing in the *Newry Telegraph* of the 10th instant, that at an election dinner given by you on the 7th, one of the toasts was 'The Battle of the Diamond,' I am desired by his Excellency, now that the elections are all terminated, to desire that you will inform him whether it can be possible that you were thus a party to the commemoration of a lawless and most disgraceful conflict, in which much of the blood of your fellow-subjects was spilt, and the immediate consequence of which was, as testified at the time by all the leading men and magistrates of your county, to place that part of the country at the mercy of an ungovernable mob?—I have the honour to be, your most obedient servant,

T. DRUMMOND."

All the magistrates, except Colonel Verner, at once answered that they were not present when the toast was proposed. It was the 29th August before the colonel wrote in answer to the brusque note, which is as characteristic of Drummond as it is unlike "the most urbane minister of his age," who directed it to be written. In his answer he parried the question put to him, and declined to reply to it. He said—

"I have received a letter, dated August 22, bearing your signature, and inquiring of me, by the direction of His Excel-

lency, 'whether it can be possible that I was a party to the commemoration of a lawless and most disgraceful conflict, in which much of the blood of my fellow-subjects was spilt, and the immediate consequence of which was, as testified at the time by all the leading men and magistrates of the county, to place that part of the country at the mercy of an ungovernable mob?'

"I am disposed to think that when you put a question in a form like this, you can hardly expect, on cool reflection, that I should condescend to answer it—at least, I would imagine you could expect no other answer than one which I hold superfluous, namely, that I am not capable of being a party to the commemoration of anything 'lawless or disgraceful!' I would request, if I am ever again to be favoured by a question which you are directed to propose, that it may be expressed in terms better calculated to invite an answer, and more likely also to be understood. I must say your letter does not appear to me very intelligible.

"His Excellency seems to assume that the appearance of a statement in a public newspaper authorises a call upon me to contradict or confirm it. I had the honour to entertain several of my friends at dinner on the day to which your letter refers. I am bold to affirm that at that entertainment nothing took place which loyal and honourable men would hesitate to own most frankly. But I speak, I am confident, the sentiments of my friends, and of every gentleman whose freedom is not restrained by official station, when I say that a question like this in your letter ought not to be proposed to me, and that I am bound to decline replying to it."

The following passage which occurred in the letter was understood to imply that the writer did not know to what conflict the Under Secretary referred—

"Upon the various misrepresentations, unintentional, I have no doubt, which your letter contains, I have no desire to comment. I feel it necessary only to assure you that, of all the conflicts which took place at any of the various places called by the name of 'Diamond' in the county of Armagh, there

is none to which your description is, in the least degree, applicable."

These letters having been published, the reply of the Under. Secretary to the subterfuge of the Orange grandee was looked for by the public with considerable curiosity. The answer came on 5th September, as if from Lord Morpeth; it was the joint composition, however, of Drummond, Lord Morpeth, and Woulfe.

"DUBLIN CASTLE, *September* 5, 1837.

"SIR,—I have had the honour of submitting to the Lord-Lieutenant your letter of the 29th ultimo.

"His Excellency regrets that you should have had any difficulty in understanding the letter addressed to you on the 22d August. But for such an assurance, his Excellency would not have supposed that the unsatisfactory nature of your answer could, in any degree, have been ascribed to that cause.

"As a magistrate, appointed to administer justice between Her Majesty's Protestant and Roman Catholic subjects, his Excellency desired that you should be called upon to state whether, at an election dinner, of which an account appeared at length in a public paper, you had proposed, or been a party to the proposal of, a toast commemorative of a sanguinary feud between the Protestants and Roman Catholics of Armagh. By whom, or to whom, that dinner was given—on what occasion, or in what place—his Excellency considers a matter of comparative indifference; but, as head of the Executive Government in Ireland, it concerns him to know whether you and other gentlemen in the commission held up such an event as that known by the name of 'The Battle of the Diamond,' as one deserving of being commemorated.

"You profess yourself unable to recognise the conflict alluded to under the above title, by reason of the many such conflicts which have unhappily occurred in the county of Armagh, at places called by the name of the Diamond. If his Excellency could have anticipated that you would have experienced, from this cause, any difficulty in replying to the question addressed

to you, he would have referred you to your own evidence, published in the Report of the Committee on Orange Lodges in Ireland, and more especially to the following question and answer, No 92:—

"*Question*—'The Battle of Diamond Hill took place the 21st of September 1795—did it not?' *Answer*—'It did.'

"His Excellency need scarcely observe, that the number of such conflicts does not render the commemoration of one or more of them less objectionable, or make it less imperative on him to ascertain the fact of magistrates having joined in such a proceeding.

"On account of the long-continued and bitter animosities springing from religious differences, which have disturbed the good order of society, and led to the most lamentable consequences, especially in the county of Armagh, the Legislature has declared certain acts to be penal in Ireland, which, in other parts of the empire, are not only not punishable, but not blamable, because perfectly harmless. If an assemblage of persons, even less in number than those who were present at the election dinner in question, should walk in procession through the streets, bearing party emblems or playing party tunes, they should thereby subject themselves to the punishment of the law; and it may be known to you, that many have suffered imprisonment, and many are at this moment amenable to the law, for no greater offence.

"The peasant thus offending is, in his Excellency's opinion, less culpable than the man of station and education who, on an occasion to which publicity is given through the public press, celebrates a lawless action arising out of the civil discords of his country, in which the lives of many of his countrymen were lost, as an event the remembrance of which it is desirable to perpetuate with honour.

"The former offends against a positive enactment; the latter, keeping within the letter, violates the spirit of the law, counteracts the object and intention of the Legislature, and thwarts the exertions of the Government to carry them into effect.

"If you and other gentlemen had not seemed to question

the proposition, his Excellency would have considered it too obvious and incontrovertible to require to be stated, that, if any meeting of persons is held—no matter under what circumstances of apparent privacy—and if such persons take such steps to permit, or do not take steps to prevent, publicity being given to their opinions and proceedings, they are as fully and justly answerable for whatever effect these may have, or may be calculated to have, on the well-being of society, as if such meeting had been held with open doors, or in the open air.

"But that is a question which does not arise in the present case. The meeting to which his Excellency drew your attention was, in every respect, public, and not private. It was attended by every circumstance which distinguishes a public from a private meeting. It was a dinner given at a public hotel, on the occasion of a public election, to celebrate a public event; public toasts were given, and political speeches made, as usual at public dinners; the entire proceedings were reported in detail, in a public newspaper, as public intelligence. The newspaper which first reported the proceedings was one not likely to misrepresent what had happened to your prejudice.

"Conceiving the occurrence reported to be such that a participation in it would disqualify you and others invested with the powers of a magistrate from beneficially exercising your authority, and would naturally and deservedly cause your fellow-subjects of the Roman Catholic creed to withdraw their confidence in your administration of justice, his Excellency, in the exercise of his bounden duty, called on you and them to state whether the report was correct.

"It is the invariable practice, when any representation is made to Government affecting the character and usefulness of a magistrate or other public officer, for whose appointment or continuance the Executive Government is responsible, to communicate such representation to him, before any proceedings are taken thereon, that he may have an opportunity of explaining or disavowing the statements made to his prejudice. That course was followed in the present instance, and his Excellency conceives that he had a right to expect a distinct and unequivocal avowal or disavowal of your having been a party to the pro-

ceedings in question, or a satisfactory explanation that the nature and tendency of the proceeding did not deserve the character imputed to it.

"His Excellency deems the public considerations dependent upon this transaction to be of such importance, that he is less inclined to remark upon the extraordinary tone in which your whole letter is written, considering that it is an answer to an official communication, addressed by direction of Her Majesty's Representative, to a gentleman holding a commission of the peace, and requiring an explanation of his conduct.

"Upon a full consideration of the case, his Excellency will deem it expedient to recommend to the Lord-Chancellor that you should not be included in the new commission of the peace about to be issued, and will also direct your name to be omitted from the revised list of Deputy-Lieutenants for the county of Tyrone.—I have, &c.,

"MORPETH."

The original draft of this letter remains in the Secretary's Office in Dublin, where it has been recovered by General Larcom. Mr Brady says of it—"This original draft is curious, as showing the composite character of these official letters. It appears from a pencil memorandum on the margin, that the first draft was sent to the Lord-Lieutenant without the three paragraphs commencing with the words, 'You profess yourself,' &c., and ending with 'into effect.' When these were added, I suppose by Drummond, it must have been submitted to Lord Morpeth, by whom the last paragraph but one, 'His Excellency deems the public considerations, &c.,' to the word 'conduct,' is inserted in his own handwriting, with another which was afterwards struck out; and the words at the end of the letter, 'for the county of Tyrone,' are in red ink, in Drummond's writing. According to my recollection, the paragraph in which the public character of the transaction is

pointedly commented on, was written by Woulfe. So that the letter may well be described as the joint production of Drummond, Lord Morpeth, and Woulfe. The letter shows, that at that time the Government was engaged in the revision of the Magistracy, and the papers (or copies of them) were accordingly transmitted to Lord Plunkett, then Lord Chancellor, by whom they were acted on."*

Colonel Verner, by bringing this matter before Parliament, did good service to the Government, by publishing the evidence of its principles and methods of rule. On his motion that the correspondence be laid on the table, a debate took place, which was resultless, except as a discussion of these methods and principles. It figures in Hansard as "The Debate on the Battle of the Diamond."

By this time the position of the Melbourne Administration had become exceedingly insecure. To see the causes of this, and the comparative failure of legislation for Ireland within the period with which we are concerned, it is necessary to glance at the state of parties in Parliament, and the relations of the Ministry to Irish measures and to Irish members.

Had the Melbourne Administration been as strong in the Upper as it was in the Lower House of Parliament, it might have done much in the years that had passed for the redemption of Ireland. The principal Irish measures which the Ministry had attempted to carry related to Tithes, Municipal Reform, and the Poor Laws.

The leading feature of the Tithe Commutation Bill, and that which alone prevented its passing, was the

* Letter to present writer, from the Right Honourable Maziere Brady, dated 29th March 1867.

appropriation to general Irish uses of the surplus to be obtained by reducing the Church establishment. The bill proposed to commute the composition of tithes into a rent charge, payable by the owners of the estate. The owners would, of course, reimburse themselves from the tenants. It was thus that Sir Robert Peel, taunting O'Connell for supporting the measure, could call it "a mere swindle of the Irish peasantry!"—a device for getting over the difficulties of collecting the tithes, which for some years it had been found impossible to collect. But the bill, further, proposed a scale of payments to the clergy proportional to the number of Episcopalians in their cures, L.100 per annum to be a minimum; and it proposed that the surplus, obtainable through this arrangement, should be applied to national uses. It was in respect of these clauses that the bill was a measure of justice to Ireland. What was the injustice appears from the following statistics which were before Parliament. The whole population numbering 7,943,940, the Catholics numbered 6,427,712; the other dissenters, 664,164; and the Episcopalians only 853,064. That is, in the population there were 7,091,876 dissenters and only 853,064 adherents of the Established Church! In one diocese there was less than one Episcopalian to a thousand acres of land. There were 151 parishes without a single Episcopalian, and 860 parishes with less than 50 Episcopalians. It may be added, though somewhat irrelevantly, that, on the other hand, in 903 benefices the Protestants held 10,500,000 acres of the land; while the Papists, not all representatives of the native race, held only 645,000 acres.

By the Municipal Reform Bill it was proposed at once to destroy the corrupt corporations, and to establish

local self-government in Ireland as it was established in England and Scotland. There were in all, in Ireland, 71 municipal corporations, of which between 40 and 50 had been erected by James I. expressly in the interests of Protestantism. The corporations embraced a population of 900,000, of whom only 13,000 were corporators. In these communities plunder and peculation were systematized, the interests of the public being sacrificed to the interests of the few. Since 1792 the corporations had, in law, been open to Catholics, but, up to 1835, only 200 Catholics had, in fact, in all Ireland, been admitted to the freedom of any of them. The corporations thus constituted performed at least one important function which affected materially the administration of justice. The Sheriffs were chosen from the corporate bodies, and the panels for special juries again were chosen by the Sheriffs. The majorities in the panels were, of course, corporators; and, as a consequence, a nation of Catholics found themselves obliged to submit such suits at law as they engaged in to the arbitrament (practically) of Protestant juries. This was one of the chief of the many evils (left at last unremedied) which the Municipal Reform Bill proposed to remove.

The proposed Poor Law system, it was hoped, would prove a relief to distress, a check upon mendicancy, and a tonic and alterative to the whole social system.

Had these legislative measures been timeously carried, they must have done much good and averted much evil. Their promoters were, however, repeatedly defeated, and their failures were so many springs of discontent and agitation. When a measure of success came at last, the people were in no mood to rejoice in it, or even to be satisfied by it.

The Tithe Bill had been lost in 1834. In the spring of 1835 the Whigs, by resolutions on the appropriation question, overthrew the Peel Administration. Thereafter, in that year, the Melbourne Government carried their Tithe Bill in the Commons, and abandoned it on the surplus and appropriation clauses being struck out in the Lords. The bill had the same fate in 1836. In 1837 it passed the Commons, was suspended in the Lords, and dropped on the death of the King. It became law in 1838, as a mere commutation measure, on the final abandonment by the Whigs of the surplus and appropriation clauses, which alone recommended it to the Irish. By insisting on these clauses the Whigs had driven Peel from office, and obtained it for themselves; and now, to retain office, they gave up the clauses. The small end of the wedge, which might by this time have been inserted, was withdrawn, and has never since been exhibited. Five years were lost of the good effects which the measure was calculated to produce as a mere aid to social order. The deep-seated injustice remained undiminished and more felt than before. That a majority in the popular branch of the British Legislature for five years proclaimed the Irish Church, as established, to be an injustice, is a fact hitherto resultless, save as an encouragement to the leaders of Irish agitation.*

* Nearly thirty years have passed since the abandonment of the principle of the appropriation clauses; yet, according to some, whose business it is to be informed of the state of public opinion, the country is not one whit more prepared now to support such a measure than it was in 1838. The belief seems to be that the influence of the Church of England would be sufficient to secure the overthrow of any Ministry that renewed and persisted in a proposal to reduce the Irish Church Establishment and appropriate its surplus funds to national Irish uses. It is hard to believe this, and harder to believe that within the last thirty years there has not been a growth of liberal feeling in the country, and even among

In regard to Municipal Reform, the Whig majority in the Lower House was similarly neutralised by the Tory majority in the Upper. The Government bill shared the fortunes of the Tithe Bill in every year from 1835 to 1838—carried in the one House, rejected in the other, or dropped on being disfigured by amendments. That the Irish corporations were indefensible was on all hands admitted. The fear was that the Reform would give the political preponderance to the Catholics. In the Lower House it was said that the bill would establish Town Councils "as normal schools of agitation and authorised engines of the Popish priesthood." It was more pointedly put in the Upper House, that it would deprive the Protestant minority of their political supremacy. The Emancipation was as yet to a considerable extent an unreality; many even of its promoters feared to carry it through the institutions of the country. And what most influenced these wavering friends of Emancipation was the dread of danger to the Church. The Church, it was said, would crumble at the touch of free institutions. "This is the real mischief of that Church," said Mr Buller, in the debate on the bill in 1837. "Its mere existence has been a dreadful evil; but the train of its auxiliary evils has been still more dreadful. To maintain the Church in defiance of the hostility of the nation, you have been obliged to pervert every other institution that belongs to it." The perversion of the *municipia* had certainly

the classes of ecclesiastics. What was so often carried through the Commons might be expected to be successfully carried through it again. The House of Lords of to-day is more liberal than that of 1838, and might be expected to pass such a measure, should the Liberals insist upon it. To make an attempt at least, in this direction, would appear to be one of the most obvious duties incumbent upon the leaders of the Liberal party.

such an origin. The cause which had produced the corporations was still, for a time, to maintain them. The Municipal Reform Bill was lost in 1835, 1836, 1837, 1838, 1839—all the years we are interested in. In 1840 it passed rapidly through the Lower House, being supported by Sir Robert Peel; it was again attacked and amended in the Lords. When it was sent down to the Commons they demurred at the amendments, which were highly important; but they finally accepted them. The deteriorated and corrupted bill became law on the 10th of August 1840, leaving unremedied several of the crying evils which had led to its being proposed.

The Poor Law Bill had better success. It was founded on Mr Nicholl's report in 1836 on the state of the poor in Ireland. This report stated that there were 2,385,000 persons in Ireland insufficiently provided with the common necessaries of life, and requiring relief for thirty weeks in the year, owing to want of work; and that the wives and children of many others were obliged to beg systematically, while mendicancy was the sole resource of the aged and impotent.* To meet a state of matters so deplorable, Government, in 1837, introduced their Irish Poor Law Bill. It was dropped in that year, with the other bills, on the death of the King. In 1838 it became law, in spite of stout opposition from the Tories, who declared it to be a virtual confiscation of property. The

* Mr Nicholl's view of the state of Ireland may be gathered from a single paragraph in his report:—"Ireland is now suffering under a circle of evils, producing and reproducing each other,—want of capital produces want of employment—want of employment, turbulence and misery—turbulence and misery, insecurity—insecurity prevents the introduction and accumulation of capital, and so on. Until this circle is broken the evil must continue, and probably augment."

principle of the English Poor Law, said Lord Lyndhurst (giving a subtler shape to the objection) was that no one should perish from want. The pauper was *saved* in a poorhouse so uncomfortable that he would rather work than be so *saved*. "How can that principle," asked the noble lord, "be extended to Ireland, where there is no work?" The objection was unanswerable, and its point was that the Irish should be left to die. A majority of the Lords, however, passed the bill in spite of the principle. It could not, of course, though passed in 1838, come into operation till the following year. But by the 25th March 1839—so vigorously was the act carried out by Mr Nicholls—twenty-two unions were declared, and, in eighteen of these, guardians were appointed. In the course of 1840, 127 unions were declared, leaving only 3 to be formed, while 14 workhouses were already opened for the reception of paupers.

The measures of which the history has just been briefly given, for years fruitlessly occupied the time of the Legislature. Never was it truer than in this period that Ireland was the cardinal point in English domestic politics. The Ministry was kept in life by its Irish policy, but in a condition of partial paralysis. In a minority in the Lords, it owed its majority in the Commons to its alliance with the Irish—an alliance not very profitable to either party, though it was always something for the Irish to keep the Tories out. There was another cause for the alliance, so far as the Irish were concerned—the popularity (resting on the facts which we have already seen) of the Irish Administration.

While these Irish Bills were being bandied about between the Upper and Lower Houses of Parliament, events were occurring in Ireland which, springing out

of the Ministerial failures, were to have a powerful reaction on the unsuccessful Ministers. The discontent of the Catholics, caused by the failure of the Government Tithe Bills, led, in the summer of 1836, to an agitation for the total abolition of tithes. This was the primary object of "The Petition Committee," out of which speedily grew up "The General Association," which, with wider aims, rapidly extending itself, soon overlay the country with its rent-collectors and "pacificators." "From the capital," says the Tory writer in the "Annual Register," "the bloated and ferocious monster extended in all directions its monstrous and grasping limbs." He maliciously adds (and somewhat discordantly, considering the image first employed), that the monster was left undisturbed by the Government in its den! It is hard to see how the Government could have interfered with a society, all whose objects were legal and declared, and proceedings public.

In the debate on "the Battle of the Diamond," when Drummond was accused of reserving all his rudeness for the Orangemen, O'Connell declared that that was not so, and that on a recent occasion he had himself been taken to task by the Under Secretary as vigorously as Colonel Verner had been. The fact remained, however, that the relations of the Government to the agitators was full of delicacy and difficulty. The demagogic career of O'Connell was somewhat restrained by his being a supporter of the Government; while, by depending for its existence on his support, the Government was peculiarly exposed to the charge of conniving at his dangerous agitations.

This charge was the rallying cry of the Ascendancy, simultaneously become vigorous and persevering in agitations counter to those of the O'Connell party.

We have their view of the political situation in a petition which they presented to the House of Lords in 1837 :—

"The dangers which threaten us are extreme, and are of a character to which the history of our country affords no parallel, unless it be found in the disastrous reign of James the Second. The establishment of our religion is assailed—the settlement of property within the realm is menaced [The allusion is to the appropriation clauses of the Tithe Bill and the projected Poor Law], and the parties who are conspiring the overthrow of both have acquired the power to do them harm, by solemnly abjuring any intent to subvert the one, and by swearing 'to the utmost of their power to defend the other.' Hostility thus unprincipled would cause alarm, if it sought the attainment of its ends by such means only as our free constitution allows; but the enemies of our national establishments have greatly augmented our danger by adopting means conformable, indeed, to the spirit of their designs, but repugnant alike to justice and humanity. They have persecuted, even unto death, several faithful ministers of our Church—they have habituated a large portion of the people to practices of dishonesty and fraud—they have taught them how legal rights may be successfully frustrated—they have convulsed the country by a most pernicious agitation [This from the 200,000 armed Orangemen of 1836!], and they have organised a system of resistance to the laws which is daily becoming more extensive and more formidable.

"We grieve to say that the Government has not punished or opposed the authors of these cruel and audacious proceedings. . . . [The complaint is against the non-suppression of the General Association, and certain acts of clemency, of which mention has been made, on the part of Lord Mulgrave.]

"The results of this unnatural confederacy between legitimate power and a faction which makes lawlessness its practice and its boast, are, unhappily, notorious. The friends, advisers, and patrons of Her Majesty's Government, are those who recommend and have openly and successfully declared resistance to the laws which that Government has been appointed to administer."

The consequence of this petition, and of the clamours of the Ascendancy party, was the virtual impeachment of the Mulgrave administration. A discussion of the principles of the administration in Ireland had taken place in February 1837, on the introduction of the Municipal Reform Bill in the House of Commons. Later in the year, it was renewed in the Lords, on a motion of the Earl of Roden for returns as to the state of crime in Ireland since 1835. There was another and similar discussion in December 1837, on the motion of Colonel Verner, which introduced the debate on the Battle of the Diamond. The discussion was renewed in both Houses in March 1839.

The circumstances which led to the renewal of the discussion were connected with the debate on Lord Roden's motion in the Upper House in 1837. In the course of that debate Lord Mulgrave (then Lord Normanby), and other speakers on the same side, declared that all inquiry led to the conclusion that the murders and manslaughter in Ireland were not owing to religious difficulties or political differences, but almost exclusively to agrarian grievances. Against this opinion the listening Orangemen and Irish landlords vehemently protested, the Duke of Wellington quoting the authority of the Marquess Wellesley to the effect that even the agrarian disturbances themselves were ascribable to political agitation. "From that time," says Miss Martineau, "the Irish landlords and political chiefs on the Tory side seem to have taken for granted that the Government was a company of declared foes, who would keep watch on the management of their private affairs, and cast upon them the responsibility of all outrages perpetrated on the Irish estates."

When this debate, and the feelings it evoked, were still recent, an outrage committed in Tipperary led to the following correspondence between the magistrates of Tipperary and the Government :—

"*To his Excellency the Lord Lieutenant and Governor-General of Ireland, &c. &c. &c.*

"CASHEL, *7th April* 1838.

"We the undersigned magistrates of the county of Tipperary, this day assembled at Cashel, at a very short notice, beg leave respectfully to state to your Excellency that it is with feelings of the deepest horror we communicate to your Excellency the dreadful and atrocious attack made by some villains upon the lives of Samuel Cooper, Esq., J.P., Austin Cooper, Esq., and Francis Wayland, Esq., on the 5th day of April.

"It appears that these gentlemen were proceeding to the fair of Tipperary on that day, the two Mr Coopers in a gig, and Mr Wayland on horseback, when they were fired upon by four men; Mr Samuel Cooper and Mr Wayland returned the fire, but it is horrifying to relate that Mr Austin Cooper was shot dead by a ball passing through his head, and Mr Wayland was severely wounded in the hip.

"There are circumstances connected with these horrible facts illustrative of the state of society in this county, which we, the undersigned, deem it our duty to represent to your Excellency.

"It appears that it was known for some time previous to this attack that it was the intention of the miscreants of the country to assassinate these two gentlemen, that a committee of villains had met and determined on the death of Mr Austin Cooper, that his friends had warned him repeatedly of his danger; yet, notwithstanding the precautions he took, he was unable to avoid the fate to which he had been doomed. Mr Wayland's house was attacked a few days previous with the intention of shooting him.

"Comment upon these events we feel to be unnecessary. We beg leave to state to your Excellency that the large addi-

tional force of police and military ordered into these districts, in consequence of the memorial addressed to your Excellency by the magistrates assembled at Tipperary last November, has not been productive of those effects which your Excellency then calculated upon.

"This scene of slaughter occurred in the barony of Kilnemanagh, on the borders of the barony of Clanwilliam. The magistrates of that meeting declared that neither life nor property was safe in that part of the country. We, the undersigned, declare that in that district neither life nor property is safe. We therefore respectfully trust that your Excellency will put in force the strongest powers which the laws of the land permit in those districts.

"We consider it our duty to state to your Excellency that we believe the result of the late assizes for this county has proved how terrible is the state of intimidation which exists, or seems to exist, among the juries of this county, an effect which the Crown can at all times prevent by again resorting to the old and wholesome practice of challenging, which, properly acted on, would be productive of the best effects.

"We beg leave respectfully to hope that her Majesty's Government will bring in a bill to Parliament for the purpose of inflicting a heavier penalty than that now in force on persons for having unregistered arms or ammunition in their possession. We also recommend that licenses granted for keeping arms be renewed annually, and that additional powers for searching for arms be given to magistrates."

This letter was signed by Lords Glengall and Lismore, and by thirty other Tipperary Magistrates. The answers of the Government, which are subjoined, were addressed to Lord Donoughmore, the Lord Lieutenant of the county.

"DUBLIN CASTLE, 18*th April* 1838.

"MY LORD,—I am commanded by the Lord Lieutenant to acknowledge the memorial of several magistrates of the county of Tipperary, assembled at Cashel on the 7th inst.

"His Excellency heard with the deepest concern of the

lamentable occurrence to which the magistrates have called his attention, and has not failed to direct the most prompt and vigorous measures to be adopted with a view to bring to justice the perpetrators of so atrocious an act. His Excellency has reason to hope that these measures will be speedily attended with success.

"His Excellency will not now notice the other topics contained in the memorial, further than to observe, that he deems them deserving the most serious attention. They are so much at variance with the official information which has come to his knowledge, that he considers it necessary to institute an immediate and careful inquiry, with a view to ascertain, in the clearest manner, the actual extent of the evils which the magistrates represent to exist, and, so far as may be possible, the immediate causes to which they may be attributed.

"When his Excellency has received the information which he expects to derive from such inquiry, he will communicate fully to the magistrates his opinion as to any steps which he may in consequence deem it his duty to adopt or recommend.
—I have, &c., T. DRUMMOND.

"The Earl of Donoughmore.

"DUBLIN CASTLE, 22*d May* 1838.

"MY LORD,—In the communication of the 18th of April, which I had the honour to make to your Lordship by command of the Lord Lieutenant, in reference to the memorial of several magistrates of the county of Tipperary, your Lordship was informed that his Excellency considered it necessary to institute an immediate and careful inquiry, with a view to ascertain, in the clearest manner, the actual extent of the evils which the magistrates represented to exist, and, so far as might be possible, the immediate causes to which such evils might be attributed; and that when his Excellency had received the information which he expected to derive from such inquiry, he would communicate fully to the magistrates his opinion as to any steps which he might in consequence deem it his duty to adopt or recommend.

"Before proceeding to state to your Lordship the nature and result of that inquiry, I am directed by his Excellency to

observe, that he certainly read with great surprise the statement put forth by the memorialists, in which they declare that the juries of their county act under a feeling of terrible intimidation, and refer to the proceedings at the last assizes for proof of that assertion. For the first time since the government of Ireland was intrusted to his Excellency, had such a statement been made to him, and his Excellency found great difficulty in believing that, if such a state of things had existence, no report of it should have reached him from any of the numerous public officers engaged in the administration of justice, under whose cognisance it must necessarily have come in the performance of their duties; nor could his Excellency suppose that a matter of so much moment, so vitally affecting the administration of the law, and the consequent security of life and property, should not have become known to the judges in their intercourse on their respective circuits, not only with grand jurors and magistrates, but with sheriffs and other ministerial officers, or indeed could have escaped the discernment of those learned persons themselves while presiding at the trials of offenders.

"His Excellency could not for a moment doubt that, if any of the officers of the executive, or any of the learned persons to whom he has alluded, had witnessed, or even heard on credible authority, that juries had ceased to be capable of discharging their important functions, from the apprehension of danger, he would at once have brought so serious a matter under the immediate notice of the Government.

"Though no such statement had been made to the executive, his Excellency, nevertheless, in deference to the representation made by the memorialists, and with a desire that a matter so serious should not rest in vague conjecture, or on opinion not sustained by facts, deemed it his duty to direct, among other inquiries, letters to be addressed to the several stipendiary magistrates of the county, calling upon them to state whether any and what instances of injury to the persons or property of jurors had come under their observation, which could be distinctly attributed to verdicts given by such jurors. In the answers received from all these gentlemen, they uniformly

declare that not a single instance of the kind has ever occurred to their knowledge.

"Major Carter says,—'There are no records of such events in this district; and occurrences of that nature could not have passed my observation, or that of the sub-inspector, formerly chief constable for twenty-seven years, with whom I have conversed on this subject.'

"Mr Willcocks—'I am not aware of any instances of injury to the person or property of any juror, distinctly attributable to any verdict which he may have given.'

"Mr Yokes—'I do not remember an instance in any county where a juror was injured on account of any verdict he may have given.'

"Mr Singleton—'No instance of the sort at any time came under my observation.'

'Mr Tabuteau—'No instance of the kind has come under my observation, nor has any complaint been made, or information given to me, of any juror having in any way suffered for any act done by him in the execution of his duty as a juror.'

Captain Duff—'None such have come under my observation; and I may safely add, that none could have occurred in this district without coming to my knowledge, nor that of the chief constable, whom I have questioned on the subject.'

"Captain Nangle—'In no instance that has ever come under my observation has any juror suffered injury attributable to any verdict he may have given.'

"His Excellency also directed a similar communication to be made to the Crown solicitor of the circuit, and has received from that officer the answer that—

"'No case of the kind has come within the knowledge of the Crown solicitor.'

"In reply to a similar communication to Mr Barrington, Crown solicitor of the Munster Circuit, three out of the four counties of which adjoin Tipperary, he states—

"'No instance has occurred on the Munster Circuit, while I have been Crown solicitor (now nearly twenty-five years), of injury suffered by any person in consequence of having found a verdict of conviction in any case.'

"As the magistrates referred to the result of the last assizes, his Excellency deemed it proper to inquire particularly into what occurred on that occasion, in reference to that class of cases with respect to which intimidation, if it had at all existed, would have been most likely to operate, and his Excellency called for such information as would enable him to compare the result of the trials which then took place with those for similar offences at former assizes in the same county. The following table shows the result:—

	Number of Cases of Homicide prosecuted and tried.	Results of the Trials.		
		Number of Cases in which the Jury convicted.	Number of Cases in which the Jury acquitted.	Number of Cases in which the Jury disagreed.
1834, Spring, . .	18	11	7	...
„ Summer, . .	20	10	10	...
1835, Spring, . .	22	12	10	...
„ Summer, . .	15	11	4	...
1836, Spring, . .	25	18	7	...
„ Summer, . .	20	10	10	...
1837, Spring, . .	30	16	14	...
„ Summer, . .	17	8	7	2
1838, Spring, . .	25	12	12	1

"It thus appears that at the last assizes the proportion of convictions to acquittals was precisely the same as at the summer assizes of 1834 and 1836, the convictions and acquittals being exactly equal in number, and that the result was nearly similar at the spring assizes of 1836, and at the spring and summer assizes of 1837. It further appears that, while at the spring assizes of 1834 the proportion of convictions to acquittals was as 11 to 7, the proportion was diminished to an equality at the summer assizes of the same year; and that, while at the spring assizes of 1836 the proportion of convictions to acquittals was as 18 to 7, they were at the next assizes again exactly equal.

"It appears also that, while at the last summer assizes the juries disagreed in two cases of homicide, one instance only of such disagreement occurred at the spring assizes of this year.

"Results varying so considerably within very short intervals of time lead naturally to the conclusion that in Tipperary, as in other places, the issue of trials in convictions and acquittals is produced, not by the increased or diminished virtue or infirmity of jurors, but by those varying, complex, and often accidental causes, against which no vigilance can guard, and which operate in every country and in every condition of society.

"His Excellency finds, on referring to the two northern circuits, that the proportion of acquittals to convictions in cases of homicide has been considerably greater within the same period.

"His Excellency has also obtained a return of the several juries at the last assizes of Tipperary, and he finds that the great majority of the jurors resided in towns, chiefly in Clonmel, and therefore were not likely to be influenced by apprehensions of danger to person or property; and further, on examining the list, it has been found that, of the 100 jurors who constituted the juries in the several cases of homicide, 52 served both on convicting and acquitting juries, 30 on convicting juries only, and 18 only on acquitting juries.

"His Excellency also felt it his duty to refer the statement of the memorialists to the judge who presided at the last assizes, and his Excellency has received a reply from that learned person, of which the following is an extract:—

"'It did not appear to me there existed any grounds, either of fact or inference, for apprehending that the juries were intimidated; on the contrary, I considered they discharged their duties free from any bias arising from personal apprehension, or any other cause; and with regard to their verdicts, they uniformly received and acted upon the legal character of the crime as laid down by the Court, at the same time exercising their own judgments, as in their exclusive province, upon the credit to which they considered the witnesses were entitled.'

"With such facts and evidence before him, his Excellency is wholly at a loss to understand on what grounds the memorialists have asserted that the juries at the late assizes acted under 'terrible intimidation.' His Excellency cannot but

think that, in putting forth a statement, unsustained by proof, so deeply affecting the administration of justice, and so seriously impugning the acts of men who appear to have faithfully and fearlessly discharged their responsible duties, according to their oaths, the memorialists have been influenced rather by the excitement prevailing at the time of their meeting, and naturally produced by horror at the atrocious crime just then perpetrated, than by that due and calm consideration which such a subject requires, and which, under other circumstances, they would doubtless have given to it.

"The magistrates suggest a remedy for the supposed intimidation, in a recurrence to what they term 'the old and wholesome practice of challenging.' As the evil appears to have no existence, his Excellency might have deemed it unnecessary to advert to that part of the memorial; but, as it would seem that the present course of proceeding with regard to challenging on the part of the Crown is not perfectly understood by the memorialists, and as it is important that it should be generally known, his Excellency thinks it right to explain to them what the actual directions are by which the Crown prosecutors are governed in this respect.

"The privilege of setting aside jurors has not been abandoned, as the memorialists seem to think; but the exercise of it is strictly confined to cases in which those concerned in the conducting of Crown prosecutions can upon their responsibility say that just grounds of objection exist to any individual called on the jury; the direction of the law officers of the Crown being express, that no man shall be objected to merely on the ground of his religion or his politics. His Excellency entirely concurs in the wisdom and justice of that course, and he has not heard of a single fact that would lead him to conclude that the ends of justice would be advanced by the adoption of any other practice.

"His Excellency has no reason for believing that the recurrence from time to time of serious outrages in the county of Tipperary is justly to be ascribed to the existing state of the law, or the manner in which it is administered.

"The Government has been at all times ready to afford the

utmost aid in its power to suppress disturbance and crime; and its efforts have been successful, so far as regards open violations of the law. Faction fights and riots at fairs, which were generally of a very ferocious character, and the fruitful source of much subsequent crime, have been to a very great degree suppressed, though heretofore most commonly suffered to pass unchecked and unpunished; but there are certain classes of crime, originating in other causes, which are much more difficult of repression. The utmost exertion of vigilance and precaution cannot always effectually guard against them; and it becomes of importance to consider the causes which have led to a state of society so much to be deplored, with a view to ascertain whether any corrective means are in the immediate power of the Government or the Legislature. When the character of the great majority of serious outrages occurring in many parts of Ireland, though unhappily most frequent in Tipperary, is considered, it is impossible to doubt that the causes from which they mainly spring are connected with the tenure and occupation of land. But his Excellency feels that it would be quite beyond the limits, and not consistent with the character of a communication of this nature, either to enter into an examination of the lamentably destitute condition of a cottier tenantry, possessing no adequate means of continuous support, or to advert in detail to the objects for which the formation of such a class was originally either permitted or directly encouraged. If from political changes, or the improvements in modern husbandry, these objects are not any longer to be attained by the continuance of such a state of things, his Excellency conceives that it may become matter of serious question whether the proprietors of the soil are not in many instances attempting too rapidly to retrace their steps, when he finds the fact to be, from returns furnished by the Clerk of the Peace for Tipperary, that the number of ejectments in 1837 is not less than double the number in 1833. The deficiency of a demand for labour, and the want, as yet, of any legal provision against utter destitution, leave this humble class, when ejected, without any certain protection against actual starvation. Hence the wholesale expulsion of cottier

tenants is unfortunately found with the great body of the people to enlist the strongest feelings—those of self-preservation—on the side even of guilt, in vindication of what they falsely assume to be their rights; and hence a sympathy for persons charged with crimes supposed to have arisen from those causes is still found a lamentable exception to that increased general respect for the laws which has of late years been remarked with satisfaction by those concerned in the administration of justice.

"Property has its duties as well as its rights; to the neglect of those duties in times past is mainly to be ascribed that diseased state of society in which such crimes take their rise; and it is not in the enactment or enforcement of statutes of extraordinary severity, but chiefly in the better and more faithful performance of those duties, and the more enlightened and humane exercise of those rights, that a permanent remedy for such disorders is to be sought.

"Whatever a Government can do to protect the rights which the law has conferred, and to suppress violence and crime, from whatever cause arising, his Excellency, as head of the Executive, will direct and enforce; but his Excellency firmly believes that the end so earnestly to be desired will be more speedily and effectually attained by the vigorous administration of the ordinary laws than by the adoption of any more vigorous measures. The experience of the past confirms and justifies that belief. When it was reported last November that a spirit of intimidation and violence had manifested itself in the barony of Clanwilliam and certain portions of the adjoining baronies, his Excellency, after duly weighing the representations of the magistrates, who on that occasion urged that the country should be proclaimed, came to the conclusion that the ordinary powers of the law would be found sufficient to meet the exigency.

"He directed the constabulary to be strengthened, military detachments to patrol the district, and stipendiary magistrates to superintend their proceedings; several persons were arrested, and have either been brought to trial at the last assizes, or are now awaiting their trial at the next.

"In the course of a short time it was reported that the

symptoms of disturbance had disappeared. The cavalry which had been sent into the district were withdrawn upon the favourable reports of the military authorities, confirmed by the magistrates; the detachments of infantry and extra force of constabulary being, by way of precaution, still retained. It was therefore with some surprise that his Excellency read in the memorial of the magistrates the following statement in reference to these measures and their results:—

"'We beg leave to state to your Excellency that the large additional force of police and military ordered into these districts, in consequence of the memorial addressed to your Excellency by the magistrates assembled at Tipperary last November, has not been productive of those effects which your Excellency then calculated upon.'

"In contrast to that statement, it appears by a report of Mr Willcocks, on the barony of Clanwilliam, the district to which the special attention of the Government was directed in consequence of the memorial alluded to, that in the only case of serious outrage—the homicide of James Hayes, which occurred between the 8th of January and the 16th April, the date of the report—the perpetrators were arrested and made amenable on the same day. Reports of the state of the adjacent districts, of an equally favourable character, were also received from Captain Nangle and Mr Singleton; and the latter, who had been sent to Cappawhite in December, having reported that his services were no longer required in that district, was directed to return to his station on the 21st of February.

"His Excellency has also been informed by Judge Moore that applications were made to him when on the bench at the last assizes, by persons acting on behalf of three very extensive proprietors of the county, whose tenants were under charges of opposing the law, and disturbing the peace, viz., Lords Glengall, Hawarden, and Lismore, the substance of which applications was, to pray him not to permit the proceedings against those persons to be brought forward, and to have the charges against them abandoned; and that the grounds on which those gentlemen mainly urged the judge to comply with their respective applications were, the tranquil state of the several

parts of the county in which those criminal occurrences had taken place, and the good effect which his compliance would have in the country. The judge added, that those applications which regarded the tenants of the two first-named noble lords were made by letters addressed to him in Court, and that in the other instance the application was personal, but strongly pressed.

"With such facts before him, his Excellency, with all respect for the opinion of the memorialists, must still believe that the proceedings which he then directed were in the main effectual, and that the adoption of those measures of severity which are at variance with the general spirit of our laws, and are only intended to meet extraordinary emergencies, was not called for on that occasion.

"His Excellency has given, and will continue to give, to the improvement of the administration of the laws his most anxious consideration, and will willingly receive and carefully examine any suggestions offered to him with that view.

"His Excellency is encouraged to hope, by what has been effected under circumstances of much difficulty, that more may be accomplished. The rest must be left to time, to the faithful and diligent performance of their duties by the local magistracy, to the beneficial exercise of their rights as landlords, and to the operation of such measures of general policy as the Legislature in its wisdom may adopt.—I have, &c.,

"T. DRUMMOND.

"The Earl of Donoughmore,
"&c. &c. &c."

On receiving this letter, Earl Donoughmore was unwilling to make it public. He said, in his evidence before the Roden Committee, "I was very unwilling to make it public; and I sent for Lord Glengall, Lord Hawarden, and Lord Lismore, and read the reply over to them three or four times; and although I do not conceive the document, though directed to me as Lord Lieutenant, to be my document, for Lord Glengall was chairman of this meeting, I said, 'Though this is your

document, I shall not give it, under the state of excitement in which the country is. I shall not allow it to be published at present, inasmuch as I am the party to whom it is addressed.' It was so worded that it threw the blame upon the landlords of having been the authors of the outrages. That was the impression upon my mind, and I did not wish it published." Being asked to point out the passages which he conceived had a dangerous tendency, he said, "The part of this answer to which I particularly objected was this, 'Property has its duties as well as its rights; to the neglect of these duties, in time past, is mainly to be ascribed that diseased state of society in which such crimes take their rise.'"

The history of the letter, after its concealment by the Earl, is somewhat curious. It was laid on the table of the House of Commons, on the motion of Mr Hume, and was thereafter disseminated over Ireland by the press and in fly sheets before it ever met the eyes of the Magistrates, to whose petition it was the answer. The purpose of the document, according to the Earl and his friends, was to inflame the minds of the people against the landed proprietors.

A melancholy event, which occurred shortly afterwards, helped to give further publicity and importance to the aphorism—"Property has its duties as well as its rights." On the 1st January, 1839, Lord Norbury was shot in his own shrubbery in broad daylight, when pointing out to his steward some trees which he proposed should be cut down. The cause of the murder was shrouded in mystery. His lordship stood well with his Catholic neighbours and tenants; he was a kind landlord, and took no part in politics. It was asked, was this another agrarian outrage? "The very words,"

says Miss Martineau, "fired the passions of the landlords—before jealous, and now panic-stricken. At a meeting which they held, in the name of the Magistrates of King's County, at Tullamore, to consider the circumstances of this murder and of the county, they reverted to those few words of Mr Drummond's, which their vehement wrath at once raised into a proverb. . . In their fear and grief at the murder of Lord Norbury, possibly through some discontent among his tenantry (though he was a kind landlord), the King's County Magistrates reverted to Mr Drummond's proposition as a subject on which to vent their passion; and it shows how wild and desperate must have been their wrath that they could fall out with a proposition so simply indisputable. It was declared that in that letter the Tipperary Magistrates were bearded and insulted by Mr Drummond. A resolution was carried without a division, 'That it appears to this meeting that the answer conveyed to the Magistrates of Tipperary from Mr Under Secretary Drummond, has had the unfortunate effect of increasing the animosities entertained against the owners of the soil by the occupants, who now constitute themselves the sole arbiters of the rights as well as of the duties of property.' Lord Charleville ventured to declare, in moving this resolution, that the saying about property having its duties as well as rights, though innocent enough in itself, was felt to be little less than a deliberate and unfeeling insult in the circumstances under which it was offered. When the plainest truths of morals are felt to be personal insults, all men see how the matter stands; and all men know that those plain truths are then made vital. And so it was in this case. The Tory landlords of Ireland have never since forgotten that property has its duties as well as its

rights; but the annunciation of this truth was fatal to all perception on their part of the impartiality of Government rule."*

"Mr Drummond was a man whom few things could astonish," says Miss Martineau, in another place, referring to this aphorism. "One of the few things that did astonish him was the effect of certain words of his own which appeared to him as simple and commonplace as anything he ever uttered." This seems a just remark; for from the way in which the phrase is introduced, it would appear that the writer did not attach to it any great importance.† It forms a branch of a sentence, with nothing to fix on it special attention. The idea it expressed had, indeed, been so impressed upon him by circumstances, and had grown so familiar, that it may well have passed into the perfect formula without his being struck by the felicity of the expression.

The heat of the temporary passion it aroused having died out, the aphorism is, and must ever be, most influential as affecting the relations between the territorial classes and the inferior people. "I think it was about thirty years ago," said Mr Gladstone in a recent speech, "when a gentleman of high character and great ability, employed in the public service in Ireland, created very considerable alarm and apprehension by putting forward, in a concise and telling form, what was thought the somewhat revolutionary doctrine that property has its duties as well as its rights. That doctrine was received by many, perhaps more from a want of use and reflection

* "History of England during the Peace," vol. ii. p. 290.

† It merely, as we shall see, expressed, briefly, a truth which, in a paper written by him of earlier date, he had already broadly expressed in an argumentative form. See p. 336.

than from any ill intention, as if it were some monstrous conception aiming at the breaking up of the very foundations of society. But that dreaded monster, if such it was, has now become a domesticated idea. It has entered, we may say, into every house; and it lies as quietly by every fireside, as if it were the favourite cat or dog of the family."* Mr Goldwin Smith, indeed, gives the aphorism a place among the few gains to the world which form a set-off to the centuries of Irish misery. "By virtue of her long unsettlement and her special claims to consideration, Ireland is affording a clear field for the discussion of political, ecclesiastical, and social questions which the English nation, satisfied with an early and limited progress, will not suffer to be mooted directly in respect to itself. An Irish famine repealed the Corn Laws. Irish outrage gave to the empire the benefit of a regularly organised police. The desperate state of Irish property led to the passing of an Encumbered Estates Act. Ireland has introduced the system of mixed education. In Ireland the relations between landlord and tenant have been first made the subject of discussion, with some prospect of an equitable solution. In Ireland was promulgated the potent aphorism—'PROPERTY HAS ITS DUTIES AS WELL AS ITS RIGHTS!' In Ireland, where the members of the dominant Church are in a small and hopeless minority, and the Establishment is clearly a political evil, the great question of Church and State will probably be first raised with effect, and receive its most rational solution."†

The authorship of the letter to the Tipperary Magis-

* The *Liverpool Mercury*, Oct. 13, 1864.

† "Irish History and Irish Character," Oxford and London, 1861, p. 197.

trates, in which the aphorism occurs, has been the subject of some controversy. The aphorism itself has been claimed for the philosopher Paley. It has been claimed by Dr Madden for Mr (afterwards Chief Baron) Woulfe, who, at the time, was the Irish Attorney-General. Lord Normanby himself, after a fashion, set up a claim to it.

The aphorism does not occur in Paley's works. There was nothing in keeping with it either in the man or in his system. He rested his ethics on positive law almost as distinctly as did the late Dr Whewell, till the ecclesiastics concussed him into founding his system on Scripture. "The real foundation of the right of property," says Paley, "is the law of the land. . . . . My right to my estate does not at all depend upon the manner or justice of the original acquisition; nor upon the justice of each subsequent change of possession; nor upon the expediency of the law which gives it to me." It depends solely on the legal title, which being indefeasible in respect of the support of policemen's batons and soldiers' bayonets, is identical, in the Paleyan system, with "the will of God" on the subject. The law is thus at once the foundation and the measure of the rights of property, which can be limited only by legal contracts. There are rights *and* duties of parents and children in Paley's system; but only rights of property. So averse was he to sentimentalism, that he endeavoured to define even the duties of parents with quasi-legal distinctness. "When moralists," he says, "tell us that parents are bound to do *all they can* for their children, they tell us more than is true." The duties of parents are then defined, and lie close to the mere parental obligations of the law books. As to the rights of property, the only case in which

Paley provided for their suspension or limitation is that of extreme necessity. Even in this case he would enforce restitution, on the emergency being over. The relation of a proprietor to a population that has grown up on his estates, owing to his system of managing his property, was never in his contemplation, nor was any similar relation through which, by suggestion, the aphorism, or any equivalent of it, could have occurred to him.

The claims of Normanby and Woulfe are thus dealt with in an article written by the late Dr Andrew Combe, and published in the *Scotsman* of June 26, 1844 :—

"Six years have scarcely passed away since, in a letter addressed to the Tipperary magistrates, the late lamented Mr Drummond first gave utterance to the memorable words, 'Property has its duties as well as its rights,' the moral force and pregnant truth of which carried them like wildfire over the length and breadth of the land, and thereby touched a chord in the hearts of his countrymen which still continues to vibrate in unison with the noble and generous humanity which inspired him in their expression; and little more than half that space of time has elapsed since the tomb closed over him for ever. Yet, strange to say, brief as the interval has been, two claims—or, more correctly speaking, one apparent and another real claim—have been already set up in behalf of other parties for the authorship of that letter, although there can be no more room for doubt as to *who* wrote it, than there is about the noonday position of the sun in the heavens!

"The first reputed, but we trust unintentional claimant to the honour of Mr Drummond's letter, is Lord Normanby, who was Viceroy of Ireland at the time of its publication. In his speech on the address at the opening of the present session of Parliament, his lordship, when alluding to that letter, is reported in the newspapers to have used the rather remarkable words, '*I* DICTATED *and directed to be sent a letter*,' &c. This seems at first sight to be an explicit affirmation by Lord Nor-

manby that he was really the author, in the ordinary sense of the word; but a moment's reflection will suffice to show that the phrase is either a mere clerical error, such as often occurs during the hurry of reporting, or that it must have been used by his lordship in a purely parliamentary sense, as implying that the *official* credit of that as of all other documents prepared by his subordinates, belonged of right to him who was alone responsible for their contents. In the same sense, Sir Robert Peel, Sir James Graham, and all other public men, habitually speak of letters proceeding from their respective departments as their own, although they may never set eyes upon them till they are laid before them for their signature, and are, individually, as guiltless of their composition as of that of the *Novum Organon*. In no other sense could Lord Normanby claim for a moment the authorship of a letter which, although written under his official direction, was, in its form and substance, as purely the emanation of the mind of Thomas Drummond as any private letter he ever wrote. This, indeed, was so palpably the case on this very occasion, that when the letter was subsequently referred to in the course of debate by Lord Brougham, Lord John Russell, Mr Cobden, and others, it was always as Mr Drummond's, and not one of them ever dreamt, merely on the faith of Lord Normanby's speech, of quoting his lordship as the author of either its words or sentiments.

"To those who knew (and who did not?) the scrupulous honour of Mr Drummond, a still stronger proof of his exclusive right to the letter which bore his name is to be found in the well-known fact, that when complimented on it in his private capacity, which he was in the highest terms by many eminent public men, *he never repelled, but, on the contrary, always accepted the compliment;* and most assuredly he was not the man to submit to the degradation of wearing honours which he knew to belong to another. But as we cannot believe that Lord Normanby really intended to convey the meaning which his words imply, if he ever used them, it is needless to accumulate further proofs where none are wanted. Indeed, we should scarcely have noticed the expression in his speech at all, had it not been that a second and direct claim has since

been set up, and that in a question of such general and abiding interest not even a doubt should be allowed to insinuate itself into the public mind.

"With regard to the second claim, we know not which most to admire—the ignorance or the bad faith in which it has originated. It appeared in the English papers about three weeks ago, in a notice entitled 'ABILITY OF THE LATE CHIEF BARON WOULFE,' and is contained in the following words:—'One fact will show how ignorant the public were of the capacity for affairs which so eminently distinguished him. *The celebrated letter to Lord Donoughmore and the magistrates of Tipperary, in which is the memorable aphorism,* "Property has its duties as well as its rights," *was from the pen of Mr Woulfe.* Of the effects produced by that letter it is needless to speak. It never can be forgotten in Ireland. Seldom was a public document conceived in a happier spirit. Equal to the occasion which called it forth, its moral power can be best estimated by the stricken spirits of those whose arrogance and injustice were rebuked therein with stern dignity. Those who were acquainted with Woulfe, cannot be surprised at his having been the writer of the Donoughmore despatch. The faculty of saying the right thing at the right time belonged to him in a very eminent degree.'

"Here, then, is a broad and unqualified assertion of Mr Woulfe's right to the credit of the Tipperary letter; and as it has been widely circulated, to pass it over in silence would be to imply the existence at least of an uncertainty, of which there is in reality not even a shadow; and had Mr Woulfe been alive, no man would, we venture to say, have been more surprised than himself at the honour now sought to be conferred upon him. If the assertor of his right was really so ignorant of the most recent and well-known facts as not to be aware that the credit belonged to Drummond alone, he was obviously a most unfit person to offer himself as a guide to public opinion in the distribution of its rewards. If, on the other hand, he knew the fact, and deliberately propounded a falsehood for the purpose of misleading the public, he was doubly deserving of condemnation. We have noticed this matter at some length, because

we do not regard it as a mere question of personal feeling, or of simply giving honour to whom honour is due, although even such a purpose would have amply warranted our comments. The question is one of far deeper importance, and directly concerns the interests of the public. The moral and political influence of the sentiment so happily expressed by Drummond tells with prodigious force when it comes before us as the almost breathing emanation of a mind remarkable, not less for a calm, reflecting, and penetrating intellect, and most extensive acquirements, than for extraordinary justness of perception, tried integrity, and intense sympathy with the wrongs, sufferings, and happiness of those to whose welfare he dedicated his days and nights, and for whom he sacrificed his life. But that influence dwindles into comparative insignificance when we regard the same sentiment as merely a lucky hit from a clever intellect. No doubt its inherent truth would even then impart an interest to it; but it would fall upon the public ear like any other clever truth which attracts attention for the moment from its felicitous expression, and soon ceases to be remembered. While, viewed as a true type of its author's mind, it will constitute an imperishable monument to his memory, and continue to operate upon society with a powerful moral effect, when all that was mortal of him shall have crumbled into dust."

Twenty years later, on Mr Gladstone's speech at Liverpool, which referred to the aphorism, appearing, the controversy was renewed in the pages of the *Examiner*, and evoked the following letter to the editor (dated November 9, 1864) from one of Drummond's friends:—

"SIR,—More than twenty years ago the question was first raised of Mr Drummond's paternity of the maxim; 'Property has its duties as well as its rights;' and his mother, who had always believed the letter containing it to have been written as well as signed by him, then inquired upon the subject of a friend likely to be well informed, who replied, 'Fear not, Mrs Drummond; the expression has taken hold of the country, and

is *all your son's.*' She wrote at the same time to her friend Sir George Stephen, in London, who replied, 'When your son announced, in his celebrated letter to the Tipperary magistrates, not long before his death, that Property has its duties as well as its rights, it surprised none of us, it was so like his usual mode of expression. When I urged him to take out a patent for his brilliant Lime-ball Light, he answered with almost equal point, 'No; the discoveries of science belong to the world.'

"Until 1844, when a contrary statement was put forth in a work called 'Ireland and its Rulers,' nobody questioned Mr Drummond's authorship of that letter. I send you the *Dublin Evening Post* of May 5, 1840, containing the report of a meeting of the Irish National Association, at which Mr O'Connell regretted the absence, on account of illness, of his 'esteemed friend Chief Baron Woulfe,' of whom he said, 'a higher order of intellect than his never adorned the bench, and a purer soul than his never animated the human breast;' but this warm eulogist of Chief Baron Woulfe, in the very next speech made on that occasion, proposed, as you will find, 'that there be printed on the right hand of the chair—"Property has its Duties as well as its Rights"—the words of the respected friend of Ireland, whose premature death they all regretted—the late lamented Mr Drummond.'

"When Lord Normanby, who had been Lord Lieutenant at the date of its being written, seized upon the Tipperary letter in the House of Commons by speaking of it as 'my letter,' and at about the same time the author of 'Ireland and its Rulers' put forth the new idea that Mr Woulfe had been the writer of the famous letter, Mr Drummond's claim was at once vindicated by the late Dr Andrew Combe, in an article contributed to the *Scotsman*, of which I now send you a copy. It was reprinted in the *Morning Chronicle*, the *Dublin Evening Post*, and other papers, and not only remained uncontradicted, but in the *Dublin Evening Post* of Saturday, June 29, 1844, a copy of which I also send to you, the Editor adds this corroborative note:—

"'Our contemporary is quite right in the opinion he ex-

presses, that Lord Normanby never intended to convey any such meaning as the words quoted imply, if those words were ever used by him at all. So far from detracting from the just fame of Mr Drummond, Lord Normanby, who had the best opportunities of estimating his great ability and the untiring zeal with which he had devoted himself to the welfare of Ireland, would be the first and the most earnest in vindicating the claim of Mr Drummond to the authorship of the memorable letter to Lord Donoughmore and the Tipperary magistrates. With respect to the late Chief Baron Woulfe, our Scotch contemporary has done no more than justice to the memory of that high-minded man. But it is quite absurd to connect the name either of Lord Normanby or that of Chief Baron Woulfe, in any manner with the paragraph which has given rise to the observations of the *Scotsman*. That paragraph, we find, has been copied from a recent work, "Ireland and its Rulers since 1829." The writer, who, we are certain, is utterly incapable of any wilful mis-statement, must have been misled by the gossip of some ignorant pretender.

"'We, however, have it in our power to put an end to any possibility of doubt on the subject of the letter in question. *Being, at the period mentioned, in the habit of almost constant intercourse with Mr Drummond—he read to us—we remember the circumstance as if it only occurred yesterday—the original draught of the letter which was about to be dispatched on that evening to Lord Donoughmore.* We recollect, perfectly well, complimenting him on the sentiment so felicitously expressed —observing, that the style would be new to the gentlemen of Tipperary, and that it would be sure to bring an old house about his ears, or words to that effect. We asked him, had the Lord Lieutenant approved of the letter? His reply was, that he had not yet seen it, but he had no doubt of his Excellency's approval. The letter was dispatched in due course, and it produced, we well know, a prodigious uproar in Tipperary. By recurring to our files it will be seen that at the time, in reply to the various attacks made on the Government, we gave him all the credit of the letter—defending him by name, and justifying his language—"Property has its duties as well as its rights."

"'This noble sentiment struck us, at the time, as one that would become memorable in relation to the landlord and tenant system; and subsequently, we repeat it, after the letter was published in this journal, we have availed ourselves of every opportunity of irrevocably connecting the name of Thomas Drummond with a maxim which must endear his memory in the hearts of the Irish people.'

"The evidence contained in that note is decisive.—I am, &c."

One addition which the papers in my hands enable me to make to the evidence that the expression in dispute was Drummond's, is contained in the postscript of a letter addressed to him by the author of "Lalla Rookh," on 5th April 1839, and which he forwarded to his mother. "How I envy you," says Moore, "that pregnant sentence about duties and rights, *tetrrima belli causa*, or as I would suggest reading *tetorymi!*"

Another addition is to be found in a passage in the Irish Railway Commissioners' Report, which emanated from Mr Drummond's pen shortly prior to the date of the Tipperary letter. That passage (which will be found in its place in the next chapter) occurs in a discussion of the policy and justice of the evictions which were in progress in Ireland in the years 1835–38, and is as follows:—

"There is a compact implied, at least, between the landlord and the peasantry who have been brought up on his estate, by which the latter has as good a right to protection as the lord of the soil has to make arbitrary dispositions for the future management of his property. Nor do we think that it makes much difference as to the force of this obligation, whether the injurious sub-division of the lands was made by the direct sanction, and for the immediate benefit, of the tenant in fee, or by others to whom the power of a landlord over the pro-

perty had been delegated by lease. It is not denied that those sub-divisions were lawful at the time they were made. They were a part of the system then recognised and in operation for the management of property; for their effects, therefore, upon the general welfare and security, the property itself is to be justly held accountable. Nor is this responsibility to be shuffled aside, or laid at the door of persons who, having ceased to possess an interest in the lands, are no longer in a state to repair the error that has been committed; but the country will look to those who now hold the property, having received it charged with all its moral as well as legal engagements."

On comparison, it will be seen that this is simply a fuller and more argumentative statement of the proposition embodied in the disputed passage in the Tipperary letter. In both passages the leading idea is, that property has it duties as well as its rights.

A last and conclusive addition is the evidence of the Right Hon. Maziere Brady, Solicitor-General in Ireland when the letter was written, and one of its joint authors. He states that the paragraph in the letter, containing the important phrase as to the rights and duties of property, was certainly written by Mr Drummond.*

On the whole evidence, no doubt can remain that this phrase was Mr Drummond's.

As to the authorship of the Tipperary letter the following may be taken as a correct statement of the facts:—The letter was written by Mr Drummond,† but whether from a first draft or sketch by Mr Brady, then Solicitor-General, is uncertain.‡ It was revised and

* Various letters to the present writer, dated in March and April 1867.

† Letter from Mr Browning (who at the time acted as amanuensis to Mr Drummond) to the Right Hon. Maziere Brady, dated 26th April 1867. Mr Browning distinctly remembers copying the letter from the draft in Mr Drummond's handwriting.

‡ Letter from Mrs Drummond to Mr Drummond's mother,

corrected by Lord Normanby, and afterwards by Mr (now Chief Baron) Pigot, then law adviser to the Chief Secretary. It was finally settled between Drummond, Brady, and Pigot, and sent out.*

It will be seen, as might have been expected, that Lord Normanby (who expressed himself altogether too strongly if he intended it to be understood that the letter was written to his dictation, in the ordinary sense of the word,) did intervene in its preparation. The remarks made by Mr Drummond in the conversation referred to by the editor of the *Dublin Evening Post* must, as they easily might, have been misapprehended.

Mr Woulfe, then Attorney-General, had nothing whatever to do with the preparation of the letter. He was at the time attending to his parliamentary duties in London.† The claim set up for him had probably for its foundation a confused report of the fact that he was one of the joint authors with Drummond of the letter addressed, in the preceding year, to Colonel Verner, and signed by Lord Morpeth.

The copy of the letter made from Drummond's draft, and on which were put the corrections of Lord Normanby and Messrs Pigot and Brady, cannot be found.

written in July 1838; letter from Mrs Drummond, dated January 5th 1867, and various letters from the Right Hon. Maziere Brady, dated in March and April, 1867, to the present writer.

* Various letters, dated in March, April, and May 1867, from the Right Hon. Maziere Brady to the present writer.

† Chief Baron Pigot recollects that Woulfe was absent at the time in London. Letter from the Right Hon. M. Brady to present writer, April 19th, 1867. Woulfe's name appears in a division-list on 15th May 1838. Farther proof that he was in London at the precise time is afforded by two letters found by Mr Brady, and addressed to him by Woulfe from London; the one dated the 19th of May, and the other the 9th of June 1838. Letter to present writer, dated 1st May 1867. The Tipperary letter is dated May 22, 1838.

It probably, during the subsequent parliamentary discussions, passed into the hands of the Lord Lieutenant or Chief Secretary, and was never sent back to the office in Dublin.

It is time, however, to leave this discussion and return to the effects of the Tipperary letter on the fortunes of the Government. The excitement its publication caused was, we have seen, renewed and extended through the murder of Lord Norbury in January 1839.* Out of this excitement, again, came renewed attacks in Parliament, in March 1839, on the principles and conduct of the Irish administration. By this time Lord Normanby had given up the Lord Lieutenancy, and succeeded Lord Glenelg as Minister for the Colonies; and Lord Ebrington had gone as Viceroy to Ireland.

In the Lower House the attack was renewed, on the motion of Mr Shaw, for a return of the Irish Criminal Statistics for the years 1835–39; a few days later it was renewed in the Upper, on the motion of Earl Roden, for a Committee of Inquiry into the state of Ireland since 1835 with respect to the commission of crime. In both Houses the Tories were loud in their denunciations of the Administration. Never had Ireland,

* The murderer of Lord Norbury was never discovered, nor were the causes of the murder. "A very large reward," says Mr Brady, "was offered by subscription, the only effect of which was to bring forward persons who swore false informations for sake of the reward, and two of whom were actually prosecuted, when I was Attorney-General, convicted of perjury, and transported." Letter to present writer. It may here be stated that the murderers of Mr Cooper were brought to justice, owing to the measures taken by the Government, and referred to in the Tipperary letter, *ante*, p. 315. They were tried, in the course of the year 1838, at a Special Commission at Clonmel, found guilty, and executed.

according to them, been in such a fearful condition. There was security neither of person nor of property. Outrages most fearful in kind were of daily occurrence; a state of utter lawlessness and criminality was the established phase of Irish society. The House of Commons, after much debating, passed resolutions approving of the principles of the Executive in Ireland. On the other hand, the Committee of Inquiry, moved for in the House of Lords by Earl Roden, was granted. Before this Committee reported, Ministers, having been virtually beaten on their Jamaica Bill, had resigned, and had returned to office after the interlude of "the Bed-Chamber Plot." On the Committee making their report—two huge volumes of evidence, unaccompanied by comment—Lord Brougham, heading the Tories and a small party of Liberal malcontents—he never could forgive the Ministers who excluded him from office—made a successful assault on Government in the House of Lords on the 6th August 1839.* It was, of course, "a painful duty" for his Lordship to discharge, but it was imperative! He knew his motives might be suspected. He was violating old associations, and exposing himself to cruel suspicions.—It was a case for a display of oratorical power, and he rose to the occasion, concluding his speech, than which nothing could be more unfair as a view of the evidence produced by the Roden Committee, with a burst of indignation against the Ministers in reference to the Bed-Chamber Plot.

* Lord Brougham, in attacking the Ministers, turned aside to eulogise Mr Drummond as an able man, by whom they had been ably defended. The reference to Drummond was cheered. Pigot, then Solicitor-General for Ireland, writing to Drummond in reference to this, says—"Nothing could be more gratifying to your warm friends than the manner in which Brougham's mention of you was received by *the whole house*."

CHAPTER XVII.

IRELAND, 1835-1839; DRUMMOND'S SCHEME FOR REDEEMING IRELAND; APPOINTMENT OF THE COMMISSION ON IRISH RAILROADS; DATA ON WHICH THE REPORT WAS FOUNDED; DRUMMOND'S SHARE IN THE REPORT; HIS VIEWS REGARDING THE POPULATION OF IRELAND, AND CIRCUMSTANCES PECULIAR TO IT; THE RECOMMENDATIONS MADE IN THE REPORT; SUBSEQUENT HISTORY AND FAILURE OF THE SCHEME; ITS MERITS.

ONE, and the leading, scheme which Drummond entertained for the redemption of Ireland, before and during his connection with its government, was founded on the absolute necessity of improving the condition of the common people. He saw, or believed he saw, that till that was done no real progress could be made; that order and tranquillity in Ireland were impossible. These might be temporarily established by conciliating the popular leaders, by a watchful and vigorous police, and a rigorous administration of criminal justice; but so long as the causes which gave influence to popular tribunes, and disposed the people to crime and disorder, remained in operation, relapses were certain to occur, and to be more serious in proportion to the duration of their repression by finesse and physical force.

A mere reform of the justiciary could do no good.

"Where destitution is," says Drummond in one place, "there crime will be found as a matter of course; and,

with increased destitution, there will be an increase of crime." The observation is trite, but to him it was the foundation of a policy. The chief thing needful for the Irish was a permanent improvement in their condition in respect to the means of subsistence.

It was his belief, founded on general impressions, which careful inquiries afterwards confirmed, that the condition of the masses in Ireland, instead of improving, was deteriorating. The subdivision of land no longer proceeded; it was checked; farms, on the contrary, were being enlarged and consolidated. Meanwhile the population, which depended upon the land alone for support, was still increasing. The demand for land was consequently greater than before, while there was a decrease of the supply of it, arising from the consolidation of farms. This was an adequate cause for the deterioration which he believed was taking place in the condition of the labouring poor. The commerce of the country was increasing, its agriculture improving, the value of the land rising, but in this improvement the masses of the people were not participants.

How was this state of things to be altered? Emigration and a poor-law system would afford temporary relief; these, combined with better and more enlightened views of landed proprietors (which he did his best to inculcate), with respect to their own interests and those of their tenantry, might effect more lasting good; but something like *a lift* was necessary to be given to a people sunk so low, to start them on an upward course. This he proposed should be given by a judicious system of public works, which, while it gave immediate relief to the people, new directions to their energies, and new habits to their lives, should be so designed as otherwise

to promote the wellbeing of the nation by facilitating social intercourse and commerce.

After the Union, projects were more than once mooted for improving the condition of the Irish, by employing them as day-labourers on the systematic reclamation of waste and bog lands. On these projects committees and commissioners had been appointed to report. They always reported favourably, but nothing was ever done. Drummond believed that much good might be done in this way under a proper system of management. The public works which he himself most favoured, and which he projected, were a national system of railroads for Ireland, somewhat similar to the governmental systems which have been so successful in some continental countries.

Dr Madden states very briefly, and I believe correctly, what Drummond's views were as to the manner in which, at that juncture, such public works might affect Ireland:—"He believed that the great thing for the British Government to apply itself to in Ireland was the consideration of the vast mass of the people. For schemes of Government he cared little, and it was not the tendency of his mind to regard politics in that light in which they are regarded by the statesman, strictly so called. He looked upon Ireland with a practical eye, and thought that a British ruler need not be over-anxious about future danger from the Irish. He considered that it was impossible to raise a middle class in Ireland without tranquillity, and that there could not be quiet unless the people were employed. Hence he was such an advocate of railways upon an extensive plan, because,—1. They would give temporary employment to the peasantry, and drain off some of the competitors for land. 2. By employing the peasantry the

class above them would temporarily profit. 3. A lull would be created, in which the social structure would be knit more firmly together. 4. Private capital would gradually find its way into the country, and employ the labour disengaged on the completion of the railways."*

This scheme for the redemption of Ireland had probably been matured before 1835; the state of landed titles, as a source of the national evils, seems never to have struck Drummond. He had great faith in the scheme, and devoted all his energies to carrying it out. Other reasons for seeking a general national system of railways for Ireland were no doubt present to his mind. The private companies, which were acquiring monopolies of the carrying business of England, were already beginning to show what they must come to. Already had ruinous parliamentary contests cost, in some cases, nearly as much money as might have sufficed to form the projected lines. Railway interests were becoming a power in Parliament, and threatening to be able soon to control legislation on railway subjects,—to make it wholly in their own favour and adverse to the public; railway fares were high, and railway carriages uncomfortable. It was thus natural that he should desire to prevent Ireland being handed over to private railway companies. The soil was virgin, only six miles of rail—between Dublin and Kingstown—being as yet, in 1835, in the course of construction. The one idea, however, which led him to become the advocate and the martyr of the Irish national railroad scheme was undoubtedly that, through some such steps as those stated by Dr Madden, it might be the means of permanently improving the condition of the mass of the Irish people.

* "Ireland and its Rulers," Part III. p. 55.

There is no doubt that the scheme was purely and solely Drummond's. Earl Russell is clear as to this, and so is General Sir J. F. Burgoyne, who acted with Drummond on the Railway Commission. Professor Barlow also, another of the Commissioners, has recorded the fact that it was generally understood that the whole idea was Drummond's. What the negotiations were, however, which preceded the appointment of the Commission, I am not in a position to state. After the concurrence of the Cabinet was secured, it was arranged that the best course was to begin by resolution in the House of Lords. In the course of the session of 1835–36, the Marquis of Lansdowne proposed in that House a resolution in favour of an address to His Majesty William IV., begging him "to appoint persons of competent authority to consider and report upon the principal lines of communication in Ireland, with reference to the comparative advantages and facilities they afford for the construction of railways, and that with a view to ascertain the best lines between any of the principal places in Ireland which it may be advisable to connect by railways, and for which works Joint-stock Companies may be willing hereafter to apply to Parliament." The resolution was unanimously agreed to, and in pursuance of it the King, on the 20th October 1836, issued the Commission. The Commissioners appointed were Mr Drummond (who, already overwhelmed with work, *volunteered* to undertake this new labour in which he was so much interested);* Colonel (now General Sir John Fox) Burgoyne, R.E.; Mr Peter Barlow, professor of mathematics in the Royal Military Academy at Woolwich; and Mr (now Sir) Richard

* Letter from Lord Normanby to Mr Drummond's mother, 30th July 1838.

Griffith, the geologist.* They were directed,—*First*, To consider as to a general system for railways in Ireland in such manner, either by causing surveys to be made of the leading lines, or otherwise, as may serve best to guide the Legislature in the consideration of the projects that may be brought before it. *Secondly*, To consider as to the best mode of directing the development of the said new and important means of intercourse to the channels whereby the greatest advantages may be obtained by the smallest outlay, taking into consideration not only the existing means which the country presents, but those which may be anticipated from the resources which may in future be developed. *Thirdly*, To make inquiry as to the port or ports on the west or south coast of Ireland, from whence the navigation to America may be best carried on by steam or sailing vessels; and to investigate particularly the facilities for the construction of lines of railroad across Ireland to such port or ports in connection with the greatest possible collateral benefits to internal communications. And, *fourthly*, to inquire into all such matters as may appear essential to the useful prosecution and result of their investigations.

It will be seen at a glance that the proposed inquiry was a very large one, and demanded a rare combination of qualities in the Commissioners. Had its object been merely to ascertain the series of lines of railroad which, diverging from the capital, would, with the smallest length, open the greatest space of country, the inquiry would have been difficult. It would have been much more intricate were it farther necessary that the series of lines should be the best possible provision for the

* Short biographical and critical notices of the Commissioners will be found in an article, "Railroads in Ireland," in the *Quarterly Review*, vol. lxiii. p. 42.

traffic existing in the districts to be opened. Yet would the problem to be solved, even in the latter case, have still been much less complex and difficult than that the solution of which was the object of the proposed inquiry. This demanded not only great engineering skill, but forethought,—a power of prevision to be attained only through a comprehensive survey of the effects on traffic of the new means of locomotion wherever it had been introduced. The Commissioners had to consider and determine what places it would be most advantageous to connect by the new species of road, and the best directions for the lines from point to point of the system of points to be connected; and they had to lay out the lines, moreover, not with a view to the existing traffic, but with a view to a traffic to be created, and in whose creation it has been well said, the lines were, by a sort of inverted parentage, to bear a part. The difficulties of their task did not end even here. They had not only to consider the intrinsic merits of the scheme to be proposed, but its feasibility—the likelihood of its meeting with public approval,—no easy task, since the country, new as a colony in respect to its industrial channels, was yet old in respect to the number of the vested interests which fell to be consulted and, if possible, to be conciliated.

Let us see how the delicate and arduous duty was performed by the eminent persons who were selected to discharge it.

The Commissioners were required to report by the 10th of April 1837. They made a first Report on the 11th March of that year. Later in the year the Commission fell on the death of the King. A new Commission was issued by Queen Victoria on 4th November. The second and final Report of the Commissioners is dated 11th July 1838.

The labours of the Commissioners were most arduous; their Report, with the evidence on which it was founded, and the explanatory maps and plans which accompanied it, is one of the ablest ever submitted to Parliament. Portions of it have lost interest through the facts having become familiar—portions as embodying speculations on points now well settled; yet will the whole be still found interesting, instructive, and admirable, by any one who cares to study it.

The assistance received by the Commissioners in collecting the materials of the Report was the best possible. The Master-General of the Ordnance put at their disposal Major H. D. Jones, R.E., an intelligent officer and steady man of business, who acted as secretary to the Commission; and Lieutenant Harkness, R.E., a subaltern of ten years' standing, who analysed and condensed the statistical information—for which work he had a peculiar aptitude. They engaged for the survey of the South of Ireland Mr Vignolles, a grandson of Dr Hutton of Woolwich, and an engineer of ability, who had won experience and distinction in extensive engineering operations in the United States and in England and Scotland. For the North of Ireland they employed Mr (now Sir John) M'Neill, a favourite *élève* of Telford, an engineer of high reputation and great experience, who had already been engaged in professional researches in that part of Ireland. The Chairmen of the Boards of Custom and Excise procured for them returns relative to the trade of the country. The constabulary furnished them very valuable information respecting the inland traffic. From the Post-office and the principal proprietors of public conveyances in Ireland they got details as to the number of passengers travelling by coaches and cars, exhibiting the increase of intercourse which had followed increased facility and cheapness of

communication. From the Ordnance Survey Department they were furnished with a diagram of the whole of Ireland, made from the great triangulation, and with a map compiled from the completed portions of the survey and from the old county maps, corrected by the fixed points of the great triangulation. The diagram and map were both prepared by General (then Lieutenant) Larcom, R.E. Farther materials were procured from the principal engineers and promoters of railways in Dublin, and from the English railway companies.

Having collected these materials and matured their judgment upon them in regard to the points to be reported upon, the Commissioners resolved to lay before the public, along with their recommendations, the data upon which they proceeded. They appended to their Report the following original documents:—1. A map of Ireland, showing the different lines laid down under their directions, and those lines which were proposed by private parties. 2. A map of Ireland, showing, by the varieties of shading, the comparative density of the population. 3. A map of Ireland, showing the relative quantities of traffic in different directions. 4. A map of Ireland, showing the relative number of passengers in different directions by regular public conveyances.* 5. A geological map of Ireland. 6. A

* Maps 2, 3, and 4 were prepared by Lieutenant Harkness on the suggestion and under the direction of Mr Drummond. On these maps the writer of the article "Railroads in Ireland" in the *Quarterly Review*, vol. lxiii., has the following observations:—"We consider this map (No. 2) to be a most valuable statistical document. The amount of the population in 1831, of each town in Ireland, as also the average population per square mile, are marked in figures, and by strong lights and deep shadows. The light are (not the dry, but) the desolate; the deep shadows (not the wet and swampy, but) the densely-populated regions of Ireland. The mind is led to reflect, that tapping the

map of England and Ireland, explanatory of that part of the Report of the Commissioners which relates to the communication between London and Dublin, and other parts of Ireland. (On this map are denoted, (1) the railways that were completed, or for which Acts of Parliament had been obtained; (2) the proposed railways; (3) the lines laid down under the direction of the Commissioners.) 7. Two volumes containing working plans and sections for all the lines of railways laid down by the Commissioners. They, moreover, appended to their Report 281 pages of new statistical information collected from indisputable authorities. Thus they delivered up to the public the whole of the evidence on which they founded their recommendations, and all the materialst hat could be desired for facilitating public criticism of their views. They even put the public in possession of the working plans necessary for the national system which they devised, so that, should their recommendations be approved, the railways might be constructed without further preparation.

stagnant population of a country by a railroad is an operation which should be performed on very nearly the same principles as draining wet land—we mean that the railroad should pierce the country wherever the population is densest, just as main drains are cut wherever the region is wettest. Map No. 3 shows the quantity of traffic which upstart railway companies, looking to nothing but their own interests, would of course desire to draw to themselves; but it also shows that large portion of traffic on well-regulated canals, which, in a poor young country like Ireland, it would be highly impolitic for the Parliament to ruin. Map 4, by giving a picture of the present arterial circulation of passengers from the capital to the remotest extremities of Ireland, enables the mind to determine very nearly mechanically *what* lines of railway, by preserving a mean course, will be best adapted, not to the selfish and partial interest of any particular place, but to the uninterrupted health and general prosperity of the whole body of the country."

The Report itself consisted of an introduction and three parts: Part I., an inquiry into the various circumstances to be considered in laying out a system of railways in Ireland. Part II., an inquiry into the probable return on the capital which would be required to construct and work the proposed lines. Part III., an inquiry into circumstances peculiar to the situation of Ireland and the present condition of its inhabitants, which would render the promotion of these works, or any of them, an object of national importance, and into the means by which it might be necessary or advisable to promote them.

Part I. falls into five divisions. (1.) Amount, distribution, and employment of the population. (2.) Nature and amount of present traffic. (3.) Number of public conveyances; average number of passengers; to and from what places. (4.) Geological structure of Ireland—positions of its mountains, valleys and rivers, rocks, metallic and coal mines; facilities for construction of railways in different districts; nature and productiveness of soils in the different districts, and their capabilities of improvement. (5.) Selection and description of the lines of railway best calculated to prove most beneficial to Ireland, and to afford the greatest return on the capital expended. Part II. treats of the economy and mechanics of railways, and is also an inquiry into the return derivable from different amounts of traffic, and into the probable dividends from the proposed lines. Part III. consists of two divisions. 1. As to the situation of Ireland. This part contains three sections, which relate to the proposal to establish steam communication with America through Ireland, and lines of railway between London and the selected Irish port. 2. Treats of the condition of the population of Ireland. There are here also three sections. (1.) Circumstances

peculiar to that condition. (2.) On the influence of railroads in developing the resources of a country and improving the condition of its inhabitants. (3.) Suggestions and recommendations as to the extent of public aid which it might be advisable to afford, the manner in which it might be given, and under what conditions.

The portions of the Report which were written by Mr Drummond are defined in a letter addressed by Professor Barlow to a friend, for the information of General Larcom when he was preparing his Memoir of Drummond's professional life.

"RUSHGROVE COTTAGE, *June* 5, 1840.

"DEAR SIR,—In reply to your inquiry respecting the part taken by Mr Drummond in the Irish Railway Report, I think the best way is to place that Report before me, and to specify, as I proceed, as nearly as I can, the parts which were more exclusively the production of Mr Drummond's pen. That the whole idea was his I believe is generally understood, but this I do not know of my own knowledge. That he took a most lively interest in the work is unquestionable, and attended very minutely to every part of it; and a good deal of it was written by him.

"The First Chapter, Part I., was wholly his, viz., 'On the Amount, Distribution, and Employment of the Population,' &c. Chapters II. and III. were also written by him after the several data had been collected and arranged from returns furnished by the constabulary and from other sources. The three maps illustrative of these chapters were formed, at the suggestion of Mr Drummond, by Lieutenant Harkness. Mr Drummond also took great interest in the form and arrangement of the tabulated matter in the appendix which related to this part of the work.

"Chapter IV., 'On the Geology of Ireland,' was by Mr Griffith; and Chapter V. was a joint production of Mr Griffith and Sir J. Burgoyne; but it was remodelled and brought to its present form by Mr Drummond. Part II. was

written by me. Mr Drummond carefully followed my several deductions, perfectly comprehended them, but took no further part in this division of the work; and the first two chapters of Part III. were mine—on Steam Navigation. The third chapter of this part was principally from Sir J. Burgoyne. There is a second section to this part; the first chapter, 'As to the present condition of the population of Ireland,' was wholly Mr Drummond's; the second, 'On the influence of Railways, &c.,' was originally written by me and Sir J. Burgoyne; but Mr Drummond wished some difference in the arrangement. He therefore (retaining the facts) gave it the form in which it appears in the Report.

"The conclusion was a difficult task; it was the work of us all, and required several modifications before it met our several views. This, I believe, it did at last. Mr Drummond was much interested in this part, and weighed with extreme care and attention every sentence it contained.—I am, &c.,

"PETER BARLOW."

A statement by General Sir J. F. Burgoyne is more general. "With regard to the Irish Railway Commission," he says, "I have no doubt of the correctness of Professor Barlow's statement that the idea was Drummond's; but what is of far more importance is, that the labouring effort of carrying it out was his; and virtually it may be said that we owe the great bulk of the Report of the Commission to him. And any one who will take the trouble to look over that Report at the present day, after our now lengthened experience of the railway system, will see how very able a document that Report was, and how much it is to be regretted that the principles inculcated in it had not subsequently been more attended to."*

To see the condition of things in Ireland which prompted Drummond to undergo so much hard labour

* Letter to the present writer, dated March 13, 1867.

as his share in this Report implies, it is necessary to draw somewhat from those portions of the Report which proceeded from his pen, relating to the peculiar condition of the Irish peasantry. Notwithstanding the changes which have take place since 1838, the extracts will be found to have considerable value and interest as aids to a right understanding of some Irish questions which still remain unsettled. There was nothing their author more anxiously desired than that Irish questions should be understood in this country. In a passage in the Report, which the Quarterly Reviewer characterised as "a bold statement to submit to Majesty," Drummond says, "Ireland, though for years past a subject of anxious attention and discussion in public, IS REALLY VERY LITTLE KNOWN TO THE BRITISH PEOPLE; *and the disadvantage to both countries, arising from that circumstance, is much greater than is generally supposed.*" It seems appropriate to embody in this Memoir of the man the chief parts at least of those compositions by which he desired to make the state of Ireland better known to the public.

Drummond's account of the moral and economical state of the Irish is given with the headings under which it appears in the Railway Commissioners' Report:—

"*Amount of the Population.*—The population of Ireland was, in the year

1731, ...	2,010,221
1791, ...	4,206,602
1821, ...	6,801,827
1831, ...	7,767,401
1834, ...	7,943,960

"Estimating the increase going on for each of these periods, we find it during the first period of 60 years to be at the rate of 1¼ per cent. per annum: during the next period of 30 years, 1⅜ per cent. per annum: during the next 10 years, 1⅓ per

cent. per annum; and for the last period, only $\frac{3}{4}$ths per cent. per annum. But this interval is, perhaps, too short for a very exact result. Taking for our guide the rate of increase between 1821 and 1831, the population at the present time, 1838, would amount to 8,523,750. The population of England, Wales, and Scotland, computed in the same manner, from the census of 1821 and 1831, would amount at present to 18,226,725; whence it appears that the population of Ireland is at this time within 600,000 of being equal to one-third of the population of the United Kingdom.

"*Distribution of the Population.*—To give a distinct view of the manner in which this immense mass of people is distributed over the surface of the country, a map has been prepared, which indicates, by various degrees of shade, the relative densities of the population, the figures denoting the number of inhabitants, per square mile, within the respective boundaries. A glance at this map will show that the population is most crowded and numerous in the counties of Armagh, Monaghan, and in part of the counties of Antrim and Down.

"Diminishing in density, but still furnishing a large proportion to the square mile, the population extends over the counties of Longford, Westmeath, King's, Queen's, Kilkenny, Carlow, and Wexford; and thence a large mass, second only to the northern portion, spreads over the southern counties of Tipperary, Limerick, and parts of Cork and Waterford.

"Beyond the Shannon lies a district very thickly peopled; and the parts of Roscommon, Leitrim, &c., adjacent to the river, have nearly the same proportion of inhabitants.

"These four divisions of the population differ in social condition, in habits, character, and even in personal appearance, more than the narrow limits of their location within the same country would lead us to expect. The northern portion are better lodged, clothed, and fed than the others: the wages of labour are higher, being, on an average, about one shilling per day; and their food consists chiefly of meal, potatoes, and milk. They are a frugal, industrious, and intelligent race, inhabiting a district for the most part inferior in natural fertility to the southern portion of Ireland, but cultivating it

better, and paying higher rents in proportion to the quality of the land, notwithstanding the higher rate of wages.

"In the southern districts we find a population whose condition is, in every respect, inferior to that of the northern; their habitations are worse; their food inferior, consisting at best of potatoes and milk, without meal: the wages of labour are found reduced from one shilling to eightpence per day; yet the peasantry are a robust, active, and athletic race, capable of great exertion; often exposed to great privations; ignorant, but eager for instruction; and readily trained, under judicious management, to habits of order and steady industry.

"The population of the midland districts does not differ materially in condition from those of the south; but the inhabitants of the western district are decidedly inferior to both in condition and appearance: their food consists of the potato alone, without meal, and in most cases without milk; their cabins are wretched hovels; their beds straw; the wages of labour are reduced to the lowest point, upon an average not more than sixpence per day. Poverty and misery have deprived them of all energy: labour brings no adequate return, and every motive to exertion is destroyed. Agriculture is in the rudest and lowest state. The substantial farmer, employing labourers, and cultivating his land according to the improved modes of modern husbandry, is rarely to be found amongst them. The country is covered with small occupiers, and swarms with an indigent and wretched population. It is true that some landed proprietors have made great exertions to introduce a better system of agriculture, and to improve the condition of their immediate tenants, and a few of the lesser proprietors have made humble attempts to imitate them; but the great mass of the population exhibits a state of poverty bordering on destitution.

"The distinctions we have drawn as to the usual diet of agricultural labourers in the different parts of Ireland, are strictly applicable to those only who have regular employment. When they are out of work, which is the case in many places during three or four months of the year, the line is not so easily perceived. Then a reduction in the quantity as well as

in the quality of their food takes place; but still, though on a diminished scale, their relative local degrees of comfort or of penury are maintained nearly according to the above classification. In no extremity of privation or distress have the peasantry of the northern counties approached to a level with those of the west; whilst Leinster and the greater part of the south, though sometimes reduced to the lowest condition, retain, generally, even in the most calamitous periods, a shade of superiority. There are districts, indeed, in every quarter of the land, where, through peculiarities of the situation, or other causes, distress falls with an equal pressure upon all; but such exceptions are rare, and so limited in extent, as scarcely to qualify the foregoing observations.

"We may here observe, that in proportion as wages fall below a fair standard of compensation, the work received in return will be dear. This striking and interesting fact, sufficiently attested by experience as a general truth, has been confirmed to us, with regard to the districts of which we are now speaking, by the authority of a practical engineer, who has had most extensive professional experience in every quarter of Ireland.

"No vigilance of superintendence can be an effective substitute for the motive which adequate remuneration supplies; and, for want of such a stimulus, a sauntering, dilatory, apathetic mode of working becomes, in progress of time, the confirmed habit of the district—an evil for which an increase of wages will not prove an immediate remedy.

"*Employment of the Population.*—With respect to the employment of the people, it is essentially agricultural; but in the northern district, besides their rural occupations, numbers of the peasantry are engaged in the linen trade. The culture of flax, its preparation and manufacture, occupy a considerable portion of the time and labour of the population of the counties of Armagh, Antrim, Down, Tyrone, Londonderry, and part of Monaghan.

"If agriculture were more perfect in these districts, the farms larger, and the distinction between the farmer and the labourer more marked, such a combination of trades would probably be found neither convenient nor conducive to profit; but the farmers being also, for the most part, labourers, and the

labourers small landholders, the spare time not required for the cultivation of their land, and which, in other districts, is so often given up to idleness, intemperance, or crime, is here devoted to a profitable and useful employment, which rewards industry with a fair return, and promotes habits of peace and order. The variety of occupation afforded by this system of domestic manufacture, to the different members of the family, is its chief recommendation. While the men are engaged in weaving the yarn, the task of preparing it for the loom by breaking, hackling, and spinning, is performed by the females, who find such a mode of industry congenial to the habits of their sex, and compatible with their household duties."

There follows an elaborate view of the state of the linen, cotton, and woollen trades in Ireland.

"Besides these [trades], it can scarcely be said that there is any other manufacture in Ireland conducted on so great a scale as to be of much national importance. Under the now exploded system of bounties and protecting duties, several manufactories sprang up; but not being the natural growth of circumstances favourable to their establishment, most of them gradually disappeared as soon as the undue encouragement, which had created and stimulated them, was withdrawn. Still there are to be found, in every district, establishments of various kinds, conducted in the most creditable manner; but they do not exist to such an extent as to claim especial notice in a general view of the employment of the people. If it were necessary to show that there is no inaptitude among the population for manufactures, for such even as require the greatest ingenuity, neatness, and skill, we would select the damask of Lisburn and the tabinets of Dublin: the worked muslins produced in many parts of Ireland, and very often from the poorest cabins, rival those of France, and are sold at half the price; embroidery on silks and satins is also carried to great perfection, and schools have been established in many places for the instruction of the female peasantry in this beautiful art.

"But while the manufactures which were formed under the system of bounties have been sinking into decay, the various

processes to which agricultural produce is subjected have been gradually extended and improved. Grinding, malting, brewing, and distilling have made great progress within these few years. Until lately, the mills of Bristol and Liverpool enjoyed almost the exclusive advantage of converting the Irish wheat into flour. That process is now performed in Ireland. The construction of water-wheels, and other machinery, has been much improved, and the use of them, under favourable circumstances, has greatly increased; but there are few large mills in which steam is not united with water power, in order that the supply may be constant and regular during the summer as well as the winter months—a proof of a better system of trading and of more enlarged means.

"From north to south indications of progressive improvement are everywhere visible, and most so in places which are accessible to the immediate influence of steam navigation; but these signs of growing prosperity are, unhappily, not so discernible in the condition of the labouring people, as in the amount of the produce of their labour. The proportion of the latter reserved for their use is too small to be consistent with a healthy state of society. The pressure of a superabundant and excessive population (at least, with respect to the resources as yet developed for their maintenance and occupation), is perpetually and powerfully acting to depress them.

"*Circumstances peculiar to the Condition of the Population of Ireland.*—The present social aspect and condition of Ireland is an anomaly in itself. Whilst the country is making a visible and steady progress in improvement, and signs of increasing wealth present themselves on all sides, the labouring population, constituting a large majority of the community, derive no proportionate benefit from the growing prosperity around them. In many places their condition is even worse than it has been. This apparent incongruity is, however, easily understood and explained, by a reference to the peculiar state of property, and to the complex relations which subsist between the proprietors and the several parties deriving interests under them, from the immediate tenant down to the actual occupier of the soil.

"The division of the land into small farms, and their sub-

division into portions, continually decreasing in extent, with each succeeding generation of claimants, until, on some estates, literally every rood of ground maintained, or rather was charged with the maintenance of 'its man,' was the immediate cause of the rapid increase of the population, which, within a period of fifty years, has risen from four millions to upwards of eight.

"The defective state of the law, which, for a long time, afforded the landlord no adequate security against the partition of his estates,—and the long term of years or lives for which it was customary to grant leases, without any valid limitations being set upon the power of the tenant to underlet,—contributed without doubt to this result. But there were other causes in which the proprietors had a more direct and personal participation, and which justly imposed upon them a full share of responsibility for the consequences. Not only did they not discourage the multiplication of small tenures (which they might have done effectually by their influence, even in cases where, by former demises, the management of their estates had been placed in the power, and depended upon the will of others), but they were themselves active promoters of that system, and that from two obvious and intelligible motives—a desire to swell the amount of their rent-rolls, which were at first considerably increased by the operation of this principle, and a wish to possess themselves of political influence and power at the elections.* The local operation of the latter cause is manifest, and admits of distinct proofs in almost every populous district in Ireland; and its general effect may be inferred from the remarkable and accelerated increase of the population which took place from the year 1793, the date of the Act for conferring the Elective Franchise on that class of voters known as the Forty Shilling Freeholders. In 1791 the numbers were 4,206,612; in 1821 they were found to have increased to 6,801,827; in 1831, to 7,767,401; and now they amount to more than eight and a-half millions. It is due to the proprietors and intermediate landlords who took no measures to repress this astonishing increase, while it might have been

* Compare this with the statements in the answer to the Tipperary Magistrates, at pp. 321, 322.

beneficially checked without inconvenience or injury to any individual, to admit, that few persons, during its early stages, foresaw its rapid extension, or suspected the evils it would bring in its train. But this consideration, while it exonerates them from the imputation of culpable design or indifference, does not exempt them from the necessary consequences of their improvidence, or from the just obligations and duties inseparable from the possession of property.

"The misery and destitution which prevail so extensively, together with all the demoralisation incident to the peculiar condition of the Irish peasantry, may be traced to this source. The country, particularly in the west and south-western counties, is overspread with small but exceedingly crowded communities, sometimes located in villages, but more frequently in isolated tenements, exclusively composed of the poorest class of labourers, who, removed from the presence and social or moral influence of a better and more enlightened class, are left, generally, to the coercive power of the law alone to hold them within the bounds of peace and order. No system of constant or remunerative industry is established amongst them. The cultivation of their patches of land and the labour of providing fuel are their sole employment, which, occupying but a comparatively small portion of their time, leaves them exposed to all the temptations of an idle, reckless, and needy existence.

"In such a community there is no demand for hired labourers. Every occupier, with such assistance as his own family can furnish, manages to raise the scanty supply of food which he may need for their support, and as much grain, or other produce, as may be required to pay his rent; but beyond this, there is no solicitude about cultivating the land, nor the least taste for improving or making it more valuable. At the periods of active labour, when additional hands are absolutely necessary, every expedient is resorted to in order to avoid the employment of a single paid labourer. Children of tender years are then forced to do the work of men in the fields, to a degree far beyond their strength; and all the females who are capable of rendering assistance, are tasked in many ways utterly unsuited to their sex, and incompatible with the slightest atten-

tion to their proper cares and duties. At all times, indeed, of the year, whether the case be urgent or not, the share of labour, out of doors, imposed upon women and young girls, who might, in every respect, be so much better occupied, is as injurious to the moral condition, as it must be to the personal and domestic comfort of the peasantry.

"There is a class of landholders superior to these, holding from eight to twelve or fifteen acres, who are equally slovenly and careless in the management of their land; but necessarily obliged, on account of its greater extent, to procure assistance out of their own families. Sometimes, but rarely, these persons hire daily labourers among the neighbouring poor; and in such cases they are usually guided in their choice, not by the character or capability of the man they employ, but by the lowest rate of wages at which they can possibly obtain his service. More commonly, however, they engage, as farm servants, young men between sixteen and twenty-five years of age, who reside in the family of their employer, and hire themselves out at remarkably low wages, seldom exceeding L.1 per quarter, and, in numerous instances, scarcely more than half that sum.

"The litigation which occupies a great portion of the time of the several Courts of Petty Sessions, arises out of the disputes of this class of servants with their employers; the former being usually impatient to break off their engagements at the busy and more profitable season of the year, and the latter anxious, of course, to reap the full benefit of the contract. Another common subject of angry contention, before the same tribunals, is furnished by ill-defined boundaries, neglected fences, and consequent trespass between the neighbouring tenants of the small divisions of land above described. More time and money are commonly wasted in such contests than would suffice to repair all the damage which forms the ground of quarrel; and animosities are engendered which often lead to feuds of a lasting duration, and the most deadly consequences.

"It is plain that, under such a distribution of property, no rational hope can be entertained of the general introduction of an improved system of husbandry, or the employment of the labouring poor, to the extent and in the manner which would

be beneficial to them, and conducive to the prosperity and good order of the community.

"It is, therefore, much to be wished that such a system should no longer continue. For the preservation of property—for the interests of the public peace—for the progress of civilisation and improvement—and for the permanent good of the rural population, it is desirable that a speedy alteration should take place. The evil cannot remain stationary; it must either be met with effective opposition, or it will, by its own accumulative force, proceed to the last point at which the process of subdivision is practicable; and what may be the consequences of suffering it to go so far, it is painful to contemplate. How rapidly it is in some places approaching to that point, may be gathered from the Population Returns of the Board of Trade, which represent an increase to have taken place between the years 1821 and 1831, amounting, in certain western counties, to one in five, and in others nearly to one in four, of the whole number of inhabitants:—viz.,

In Donegal,	increase	20	per cent.
Mayo,	„	24	„
Galway,	„	23	„
Clare,	„	24	„

"Among the effects of this rapid increase of population, without a corresponding increase of remunerative employment, the most alarming, though perhaps the most obviously to be expected, is a deterioration of the food of the peasantry. It could scarcely be thought, indeed, that their customary diet would admit of any reduction, save in quantity alone; yet it has been reduced as to quality also, in such a way as sensibly to diminish their comfort, if not to impair their health. Bread was never an article of common use amongst the labouring poor; but it is now less known by them than it was at the time when a sum exceeding L.50,000 per annum was paid in 'bounties,' to induce the landholders to grow a sufficiency of grain for the supply of the city of Dublin.* Milk is become

* "By a table published in Mr Newenham's 'View of Ireland,' it appears that in a period of thirty-seven years, up to 1798, a sum of L.1,917,770 was paid in bounties for grain and flour, brought by

almost a luxury to many of them; and the quality of their potato diet is generally much inferior to what it was at the commencement of the present century. A species of potato called the 'lumper' has been brought into general cultivation, on account of its great productiveness, and the facility with which it can be raised from an inferior soil and with a comparatively small portion of manure. This root, at its first introduction, was scarcely considered food good enough for swine; it neither possesses the farinaceous qualities of the better varieties of the plant, nor is it as palatable as any other, being wet and tasteless, and, in point of substantial nutriment, little better, as an article of human food, than a Swedish turnip. In many counties of Leinster, and throughout the provinces of Munster and Connaught, the lumper now constitutes the principal food of the labouring peasantry—a fact which is the more striking when we consider the great increase of produce, together with its manifest improvement in quality, which is annually raised in Ireland, for exportation, and for consumption by the superior classes.

"For years the proprietors of land have endeavoured to counteract the evils arising from the increase of a pauper and unemployed population, and to prevent its extension. Their eyes have long been opened to the mischief partly created, and, in a great measure, countenanced by themselves; and they are quite willing to retrace their steps, and reduce their estates, if possible, to a condition more favourable to a judicious mode of cultivation, and to the regular and profitable occupation of the poor. The habit of letting their grounds in small allotments has altogether ceased in the agricultural districts, though it still prevails in parts of the manufacturing counties of Armagh and Down, where the skill of the artisan is rendered in some degree subsidiary to the toil of the labourer. Generally, however, as often as opportunities occur, they are gladly embraced, to enlarge the divisions of land to farms of dimensions better

land carriage, canal, and coastways, to Dublin. The amount lavished in bounties during the last century would have sufficed to place Ireland on a par with any part of the United Kingdom in the advantages of internal communication."

adapted to the development of agricultural science, and the beneficial employment of capital and labour. In some cases these changes have been conducted with judicious humanity; in many, it is to be feared, without much regard either to humanity or justice; but where they can be effected without injury to individual happiness or equitable rights, without doubt they must, in all cases, tend to the ultimate advantage of society, as a means of checking a great and growing evil, of increasing the wealth of the country, and, consequently, laying a firm and sure foundation of prosperity for the Irish people.

"Already considerable progress has been made towards the establishment of a better system of agriculture, and the altered and much improved appearance of the country in many places is owing to the success which has attended those endeavours. But although the land has thus been rendered more valuable, and its produce more abundant, the condition of the labouring poor has not advanced, even in those improved localities.

"The fair inference to be drawn from this fact is, that the labourer is not allowed a just proportion of the product of his own toil and industry; but the cause of that inadequate remuneration will be found in the increased number of persons forced into the market-place in quest of daily employment, in consequence of their being deprived of the resource of the potato garden and the mud hovel, in order to make room for the improvement of the land. The number of hands absolutely unemployed being thus increased, the price of labour will, of course, be kept down. Nor should it be omitted or disguised, that in proportion as these improvements shall become more general, the multitude of applicants for employment will still farther exceed the demand for their labour; and, consequently, their condition, if left entirely dependent upon the aid of the mere agriculturist, will be still more depressed, while the country is advancing in wealth and abundance.

"Such appear to be the inseparable concomitants of that transition which a considerable portion of the Irish peasantry are actually undergoing at present, and through which it is necessary, for the general good, that they shall all pass—a

transition from the state of pauper tenants to that of independent labourers, maintained, as the same class are in England, by their daily labour. This change cannot much longer be delayed with safety. It is not possible to avoid it by any other alternative than that of permitting a state of society, pregnant with all the elements of disorder and confusion, to go on unchecked, until it forces the whole population down to the lowest depths of misery and degradation.

"The proprietors of estates claim public support, in their endeavours to bring the country to a sound and secure condition, by opposing and counteracting the further progress of so ruinous a system; and if they would proceed in all cases with discretion, and a just consideration of those whose interests are as nearly concerned as their own, they are entitled to it. Of course, we do not palliate the injustice and cruelty of turning families adrift helpless and unprotected upon the world. There is a compact, implied at least, between the landlord and the peasantry who have been brought up on his estate, by which the latter have as good a right to protection as the lord of the soil has to make arbitrary dispositions for the future management of his property. Nor do we think that it makes much difference as to the force of this obligation, whether the injurious subdivision of lands was made by the direct sanction and for the immediate benefit of the tenant in fee, or by others to whom the power of a landlord over the property had been delegated by lease. It is not denied that those subdivisions were lawful at the time they were made. They were a part of the system then recognised and in operation for the management of property; for their effects, therefore, upon the general welfare and security, the property itself is justly to be held accountable. Nor is this responsibility to be shuffled aside, or laid at the door of persons who, having ceased to possess an interest in the lands, are no longer in a state to repair the error that has been committed; but the country will look to those who now hold the property, having received it charged with all its moral as well as its legal engagements.*

* This paragraph, as I formerly remarked, is an "argumentative" statement of the proposition, "Property has its duties as

"Still, however, as the landholders and owners of estates are really unable to sustain the whole of this liability, and to proceed, at the same time, with that work of improvement which is so essential for the interests of all classes of the community, and, eventually, of none more than of the labouring poor, it is much to be desired, as an object of public importance, that means may be speedily taken to distribute a part of the burden through other channels. If there were no other public ground for doing so, it would be a motive sufficient, that the suffering and privation which seem inevitable, during the transition of so vast a number of people from one state of living to another, would be thereby alleviated, and its period considerably abridged.

"Among the measures proposed for this purpose, that which appears to have obtained the most favourable share of the popular attention is the reclaiming of waste lands, such as bogs and mountains, of which there are millions of acres in Ireland very capable of improvement. No doubt a great deal of most useful improvement might be effected in this way; and, what is more to our present purpose, a wide door might be thereby opened for the profitable employment of numbers of the peasantry; but much will depend on the regulating principle, and the object of such undertakings, whether the people shall be set to work as daily labourers, to divide and cultivate large tracts for the agricultural capitalist, or as colonists, to reclaim and make rude settlements for themselves. If the latter be contemplated, it would, in effect, but spread and magnify the evil which it is proposed to remedy, only removing its pressure partially, and for a short period. As a measure of immediate relief, the change would be scarcely attended with any increase of comfort to the peasantry, while their position would be rendered far more hopeless than it is even now, and the ultimate consequences to society, in its moral as well as in its political results, would be most disastrous.

well as its rights." The portion of the Report cited in the text was prepared before the circumstances arose which called forth the celebrated Tipperary letter, the authorship of which has been a subject of some controversy.

An extensive reclamation of the waste lands, however, by the application of capital and intelligence, and upon a well-ordered system, would add most materially to the resources of the country, and, besides affording the means of present employment to great numbers, assist in providing permanently and beneficially for them, as paid labourers, on the land reclaimed through their exertions.

"Emigration is another project to which there can be no objection, except that of its insufficiency as a remedy for so wide-spread and multitudinous evils. It is impossible that emigration could be effected on so large a scale, were the people themselves ever so anxious to embrace it, as wholly to remove the pressure of distress arising from the excess of the population over the means now available for their support. It can only be resorted to as a secondary relief, effectual as far as it goes, and therefore deserving of attention and encouragement; but it must always leave behind it so many destitute and unemployed, that the cares of the Legislature or the burdens of the country can experience no very sensible alleviation from its aid.

"The measure now before Parliament, for the relief of the Irish poor, is also relied on as a means of enabling the peasantry to buffet and overcome the difficulties of their present and impending position. It is not for us to canvass the merits or probable effects of that Bill. But we may observe, that an effective Poor Law must greatly assist the object we are considering; and it is, therefore, most desirable that its provisions should be carried into effect promptly and fully. It should be recollected, however, that the landed interest will be taxed heavily for the support of the poor under that Act; and it would, therefore, be a most auspicious introduction of so great a change in the social state of the country, if the pressure of that measure were lightened by the commencement of some works of great magnitude, which should last for a considerable time, and afford employment to large numbers of the people in various parts of Ireland. And if such undertakings were of a nature evidently calculated to open new avenues to laborious industry, and thus hold out a reasonable prospect of constant

occupation, even after the period of their completion, the anxiety which, both on grounds of humanity and of policy, must attend the adoption of so great a change, would be allayed, and the most formidable of its immediate inconveniences be effectually obviated.

"The works necessary for completing such a system of railways as our Report contemplates, would serve both these purposes, by affording present employment to vast numbers of the people, and by throwing open resources and means of profitable occupation, which are now inaccessible and almost unknown. The immediate effect would be, to afford extensive relief to the most indigent portion of the population, and that in a manner the most acceptable to their feelings, and the most conducive to their moral improvement. 'In all the views of Ireland placed before the empire,' as Mr Stanley in a letter to Mr Nicholls well observes, 'there is a remarkable concurrence in attributing the poverty which exists to the want of continuous employment of the population.' To that want of continuous employment, and of adequate remuneration when employed, may be traced the cause, not only of the poverty of the Irish people, but, in a great measure, also of that heedless improvidence, and of those habits of lassitude and indolence, which it may possibly require years of a better system to eradicate wholly from their character.

"The effect of these depressing circumstances, aggravated, of course, in a very high degree, by the backward state of agricultural knowledge and improvement, is strikingly illustrated in the deficiency of the produce of work performed by Irish labourers to that of the same class in England. The Irish Poor Law Commissioners state, that the average produce of the soil in Ireland is not much above one-half the average produce in England, whilst the number of labourers employed in agriculture is, in propertion to the quantity of land under cultivation, more than double, namely, as five to two; thus, ten labourers in Ireland raise only the same quantity of produce that two labourers raise in England, and this produce, too, is generally of an inferior quality. So striking a disproportion, though certainly admitting of very considerable qualification with re-

ference to the different nature and degree of aid and facilities afforded to the labourers in the two countries, still shows a decided advantage in favour of the English workman, and fully confirms an observation which we have elsewhere made, as to the dearness of ill-requited labour.

"But the spirit of the Irish peasant is by no means so sunk by the adverse circumstances of his lot, as to be insensible to the stimulus which a due measure of encouragement to laborious industry supplies. Where employment is to be obtained without difficulty, and at a fair rate of compensation, his character and habits rise in an incredibly short space of time with the alteration of his circumstances. In a state of destitution no race of people are more patient and resigned. Their uncomplaining endurance seems almost to border on despondency. They make no effort to help themselves, probably because they despair of being able to do so effectually; and it ought to be mentioned to their honour, that in such emergencies they have scarcely ever been known to extort by violence that relief which cannot be obtained from their own lawful exertions, or the benevolence of others. Their fortitude during the unparalleled sufferings of 1822 was regarded with the greatest admiration and respect; feelings which have not failed to be renewed by their conduct on every subsequent trial of a similar kind. Within the last two years, namely, in the summer of 1836, a populous district on the coast of Donegal was exposed to all the miseries of famine, rendered tenfold more agonising by the knowledge that there was food enough and to spare within a few miles; yet the poor people bore their hard lot with exemplary patience, and throughout the entire period, though numbers were actually without food, and reduced to eat sea-weed, there was no plundering of stores, no theft, nor secret pillage.* Such forbearance, almost approaching to insensibility,

* "In 1837, while Ireland was generally free from disease, typhus fever broke out, and in a frightful form, in Rutland, County Donegal. The late ever-to-be-lamented Thomas Drummond, who taught that 'property had its duties as well as its rights,' ordered an inspection, under the direction of the Board of Health. There was no hesitation about the Report. The people were starving—

might be deemed to belong to a character incapable of being roused to exertion in any circumstances; yet the same race, who endure the last extremes of want without a murmur, are no sooner placed in a condition of supporting themselves by independent industry, than they cast aside the torpor which distinguishes them in a depressed state, and become active, diligent, and laborious. The unsparing exertions and obliging disposition of the poor, half-starved harvestmen who periodically visit the west of England are well known, and will, we are sure, be cheerfully acknowledged by all who have had occasion to employ them.

"The moral effect upon a people of a system of steady and remunerative employment is an object of public importance, not inferior to its influence upon their physical condition; for it is invariably found that where industry prevails, order and respect for the laws accompany it. Ireland forms no exception to this rule. The vice and the bane of its people is idleness. They have little to do; no useful or profitable occupation to devote their time and thoughts to; and hence those habits of intemperance, and that proneness to outrage and contention, which unhappily distinguish them. But those amongst them,

famine was local, and so was fever. Drummond's clear eye recognised the cause, and his warm heart did not delay the remedy. Provisions were immediately sent down, and the fever soon disappeared. From a friend, who was an eye-witness, we have the following incident:—On the arrival of the meal, it was placed in charge of the Coast Guard, and as, from the distress of the people, an attack was apprehended, the Guard were placed across the gate of the store with fixed bayonets. Through the crowd a wretched man rushed, and, regardless of the bayonets, dashed forwards through the open gate. So gaunt was his appearance, so famine-stricken his countenance, that even the soldiers recoiled to let him pass. He flung himself on his face on the heap of raw meal, and stuffed it down his mouth with both his hands, and then, after a few moments, cried out in agony, for a handful to take to his wife and 'weans,' that were dying of starvation, and, on inquiry, it was ascertained that for two days previously to his leaving home in search of assistance, neither he nor his wretched family had tasted food."—*Dublin Evening Post*, April 7, 1846.

who have been for any considerable time engaged in pursuits which afford encouragement to industry, rarely trouble themselves about angry local differences, or frequent the resorts of low profligacy and dissipation. The hand of the thrifty and diligent is not often raised in fierce and clamorous dispute, or seen amid scenes of sectarian strife and rancour. These are vices which proceed from idleness and the habits engendered by it; nor can there be any reasonable ground to doubt that they would speedily disappear before the civilising power of occupation and successful industry.

"To afford the means of present employment to such a people, and, at the same time, lay the foundation of their future prosperity and improvement, is surely an object worthy of a wise and great nation, and will not be opposed from any narrow and short-sighted views of economy. The interests of these countries are so inseparably interwoven, that nothing which concerns one part of the United Kingdom can be alien from the rest. But it is the direct interest of Great Britain that Ireland should be raised, and that as speedily as possible, from its present condition. Mr Stanley shows, by a very moderate calculation, that if the Irish peasantry were placed, in point of comfort, on a par with those of Great Britain, the result to the public revenue would be an annual increase of six millions in the article of Excise. This consideration alone ought to silence any objections, on the ground of expense, against affording public aid such as may be required for these works; for it gives assurance of an enormous profit on the greatest contemplated outlay.

"On prudential considerations alone, then, we should not hesitate to recommend an immediate and liberal attention to the claims of Ireland for assistance, which cannot be conferred in any shape more likely to prove beneficial than by encouraging public works of extensive and permanent utility. It is a waste of the public available resources to suffer so large a portion of the empire to lie fallow, or leave it to struggle, by slow advances and with defective means, towards its own improvement, when the judicious aid of the State might quickly make it a source of common strength and advantage.

"The policy of rendering such assistance is unquestionable. It is acknowledged to be necessary towards a colony, and must be considered more so in the case of a part of the United Kingdom, comprehended within its domestic boundaries, where neither the land nor the population can continue to be useless without being hurtful at the same time, and nearly in the same degree. Looking, therefore, at the proposition as a mere account or estimate of profit and loss, the balance is clearly in favour of a prompt and liberal encouragement, on the part of the Legislature, to whatsoever tends manifestly to call into action the great powers and capabilities of this fine country. In every instance where such encouragement has been afforded, even in the construction of a common road, the returns to the State in improved revenue have hitherto more than repaid the public outlay; and, viewed in this light, public assistance, well directed and applied with judgment and economy, is in effect a beneficial expenditure of capital, similar in kind to that which a provident landlord makes for the improvement of his estate. The only measure of both should be the assurance of an adequate remuneration.

"It were easy to show, from the actual state of Ireland, that the moral results which may reasonably be expected to flow from an improvement of its social condition, should suffice, even on the low ground of concomitant financial advantages, to fix the attention of the Legislature to this subject. We need but refer to the burdensome and costly establishments of soldiery and police, which are necessarily maintained for the preservation of peace and order, and which, in a really wholesome state of society, might be greatly reduced.

"But there are other considerations equally importing the general welfare, and which it is more pleasing to dwell upon, as being more worthy of a great and enlightened nation—considerations of justice, of generosity—of a liberal concern for the improvement and civilisation of our countrymen. In attending to such considerations, no nation was ever faithless or blind to its own best and dearest interests; and were there no commercial advantages for England in the projects which we submit for adoption, nor any promise of actual benefit to the

public treasury, or of relief from the heavy contributions which the unsettled state of society in Ireland annually extracts from it, yet the certainty of rendering this country prosperous, and diffusing the blessings of peace and industry, with their attendant fruits of knowledge and moral culture amongst its people, ought, as we have no doubt it would, be considered an ample recompense."

Having seen the scope of the inquiry and the motives which prompted it, let us turn to the conclusions arrived at, and the recommendations made by the commissioners.

They were of opinion, that the two great lines which would open the country in the most advantageous manner, afford the most extensive accommodation at the smallest outlay, and yield the greatest return on capital, would be—1*st*. A railway from Dublin to Cork by Maryborough (near which a branch should be thrown off nearly south to Kilkenny), and through Holy Cross, at which point a west branch should be thrown to Limerick, and an east branch to Waterford. 2*d*. A railway from Dublin to Navan, at which point the railway should fork in two directions—the one through Castleblaney and Armagh to Belfast; the other through Kells, Virginia, and Cavan, to Enniskillen.

They considered that a uniform breadth should exist between the rails of the railway lines in Ireland, and recommended that the breadth should be six feet two inches.

They calculated that, should the utmost economy be observed—should no unnecessary expense be admitted for the mere attainment of a perfect ideal—should single lines only be formed till double lines became imperatively necessary—should the Legislature reduce the expenses hitherto common in obtaining railway bills

and compensating landed proprietors,—then the main trunk from Dublin to Cork would give a dividend of 4·82 to 5·18 per cent., the Kilkenny branch 2 per cent., the Limerick branch only $\frac{7}{10}$ per cent.; total dividend on this main line and these two branches, 3½ per cent. They calculated that the Waterford and Limerick would yield 3·8 per cent.; while the dividend on the Great Northern line and branches would average 4·75 per cent.

As to the manner in which these works should be carried out they said:—

"There can be no doubt that parties might be found, ready to undertake certain portions of these lines, which hold out special prospects of advantage; such, for example, as the first twenty or thirty miles leading out of Dublin, over which all the traffic with other places, near as well as remote, must necessarily pass. But since, according to our calculations, the return of profit on the whole system could not be expected, for some time, to exceed 3½ or 4 per cent., it is manifest, that if the best and most productive portions are taken possession of unconditionally, there can be no reasonable hope that the remainder will ever be carried into effect. This would so completely frustrate the most important of the objects contemplated in issuing this Commission, by opposing a bar to the future improvement of the country, that we trust it will not be in any case permitted. It would be even more advisable that no partial line should be sanctioned until the country should possess within itself the means of undertaking the whole system to its full extent, than at once and for ever to obstruct and paralyse all future exertions for its accomplishment, by abandoning, to parties having particular and distinct interests, the monopoly of some of its most productive detached portions.

"We, therefore, earnestly recommend, that every effort be made to combine into one interest, and under one management and control, the whole of the southern system of inter-communication between Dublin and Cork, Limerick, Waterford, and Kilkenny; and that the Northern Line, by Navan—to Armagh

at least—be treated according to the same principle, and considered as one concern.

"If a body of capitalists be found ready to undertake either of these great works, as a whole, we presume that the general feeling of the Legislature and of the country will be to leave the execution of it, as little fettered as possible by restriction, to the management of private enterprise; and in addition to this, it would be just and advisable to relieve them from all needless expenses to which otherwise, in the existing state of the law, they would be liable. With this view, we recommend particularly, that the Act of Parliament be granted free of any charge, as for a public measure; that a mode of determining the amounts to be paid, in compensation of land and damages, be adopted, on principles more fixed and independent of private or local bias than the present practice; and that some general enactment be provided, authorising, to a certain extent, alterations of obvious utility, to be introduced in the original plan, without the costly expedient of resorting, in every case, to Parliament for a new or amended Act.

"But the investigations which we have made lead us to doubt whether any company will be induced to undertake either of these great lines, even with the facilities and advantages which might, on general principles, be afforded them. In such case we trust, that to avoid the evil of partial execution, and to accomplish so important a national object as that contemplated in the completion of the entire system, we may look forward to a certain degree of assistance from the State, as great, at least, as has been given for the encouragement of other public works in Ireland; and on those grounds of policy, which, we believe, have not been disputed, and on which it is therefore unnecessary for us to enlarge."

They then suggested—

"*First*, That Government should advance, by way of loan, a lonsiderable proportion of the amount of the estimates, at the cowest rate of interest, and on the easiest terms of repayment, to be secured by a mortgage of the works. We think that many landholders may also be found to subscribe towards carrying into effect an object which, in addition to its import-

ance as a national concern, cannot fail to benefit and improve their own properties.

"As a further assistance in filling the subscriptions, perhaps powers might be given to the counties interested, as well as to corporate towns, to become shareholders to certain amounts; the Government, in such case, advancing the money on the security of presentments, in the usual manner, and the return on such shares being available for the reduction of the county or other rates.

"A provision, however, will be necessary, in this case, to ensure the co-operation of the whole of the districts interested,—the approval of a certain majority having been obtained.

"*Secondly*, If these means be rejected, or fail to produce sufficient subscriptions to ensure, in the first instance, the execution of the entire system, we would suggest that the work might still be allowed to go forward,—beginning at Dublin, or other fixed terminus, to any other determinate point, such portion, however, not to be considered as an integral line, but only as a part of the general system, and to be continued from that point towards the ultimate intended termini of the several lines and branches, as new subscriptions are received. The subscribers to these continuations should be entitled to all the privileges and advantages arising from the whole portion of the line already executed, from the date of the payment of their respective subscriptions, equitably estimated according to the time when each subscription shall be made.

"*Thirdly*, We would further venture to suggest, that the Government should undertake either or both of the proposed combined lines, on the application of the counties interested; the outlay to be repaid by small instalments, at the lowest admissible rate of interest, and under the provision, that in the event of the returns not paying the stipulated amount of interest, the counties shall supply the deficit by presentments. . . . .

"Should either of the two latter suggestions be adopted, the Government will possess an immediate interest in the due execution of the work, and must, of course, have a great share in its direction. But even were the work undertaken without

public aid, we are still of opinion that it should, in a certain degree, be subject to the control of the State.

"It is a favourite opinion with many, that all undertakings of this description are best left to the free and unfettered exercise of private enterprise, and that the less the State interferes, either in prescribing their execution, or controlling their subsequent operation and management, the better.

"We are fully sensible of the great advantages to be obtained by allowing full scope to the vigour, energy, and intelligence of individuals associated for such important purposes; and that it would be equally inconsistent with the interests and with the rights of society were such exertions crippled or restrained by unnecessary or impolitic regulations. But we apprehend that the essential difference between railways and any other description of public works has been overlooked, and that power and privileges have been conceded to private companies which should be exercised only under the direct authority of the State, or under regulations enforced by effective superintendence and control.

"So great are the powers, so vast the capabilities of a railroad, that it must, wherever established, at once supersede the common road; and not only will all the public conveyances now in use disappear, but even the means of posting will, in all probability, rapidly decline, and eventually, perhaps, cease to be found along its line. These effects may be expected as the necessary consequences of opening a railway. Its superiority is too manifest and decided to admit of rivalry; it possesses almost unlimited means of accommodation; no amount of traffic exists on any road, or is likely to exist, which a single railway is not capable of conveying; no concourse of passengers which it cannot promptly dispose of; the velocity of the locomotive, when impelled even at a very considerable reduction of its full power, surpasses the greatest speed which the best appointed coach, on the best made road, can maintain: in short, where the capabilities of the system are brought fully into operation, they present such an accumulation of advantages, as to render it an instrument of unequalled power in advancing the prosperity of a country.

"It therefore deeply concerns the public, whose welfare is inseparably connected with all that tends to improve the internal resources, or to maintain the commercial and manufacturing superiority of these countries, that such works should be promoted; and, consequently, every encouragement, consistent with the regard due to other interests, should be given to capitalists who may be willing to undertake them. Their propositions should be submitted to a competent and duly constituted tribunal; and, if approved, should be adopted and stamped as national enterprises. As such, they should be protected from all unnecessary expense,—from extravagant demands for compensation,—from vexatious opposition, and from the ruinous competition of other companies. To that extent they have a strong claim on the protection of the State.

"But, on the other hand, the public interest would require that they should be bound by such conditions, and held subject to such well-considered regulations and effective control, as shall secure to the country at large the full benefit and accommodation of this admirable system.

"The practice hitherto followed in England has been almost the very reverse of that which we here recommend. No preliminary steps are taken on behalf of the public, to ascertain whether the proposed railroad be well adapted to its specific object, or calculated to form a part of a more general system. The best and the worst devised schemes are entertained alike, being equally exposed to opposition, and left equally unprotected against the difficulties which interested parties may raise up against them. Nay, a railway bill may be passed, or it may be rejected; but the fate of the project merely proves the number and influence of its respective supporters or opponents. Its failure or success is no test whatever of its merits, as a measure of general utility; for that consideration forms a very small part of the inquiry before Parliament."

After giving an exposition of the objections to handing over the railways in any country to private companies, the Report concludes as follows:—

"It might be well to look to the proceedings of other countries

in reference to this important matter. In France the main lines have been laid out under the immediate direction of the Government, and the conditions made known on which private companies will be empowered to construct and work them. America, as might be expected, from its separate and independent jurisdictions, has proceeded less systematically; but several States have, in general, become shareholders to a large amount, and have thus acquired great influence in the direction of the railways undertaken within their respective limits.

"In England alone the main lines of communication have been committed to the direction of individuals, almost unconditionally, and without control. We believe this has arisen, in a great measure, from the suddenness with which this invention burst upon the country, and the imperfect view which has as yet been taken of its extraordinary power, as well as of the extent to which the public interests are involved in its just application and management.

"But to whatever cause this may be attributed, we have deemed it our duty, before closing our Report, to urge these important considerations on public attention; in the earnest hope that in Ireland, where the ground is yet untrodden, every precaution may be taken, and every measure adopted, which can contribute, on the one hand, to the encouragement of the capitalist, and, on the other, to secure to the country the full and entire benefit which the railway system is capable of affording."

The Report was no sooner presented than it was greeted with clamorous abuse from several interested quarters. Public meetings were got up, and parliamentary advocates retained, to prevent the scheme being carried out in any of the ways suggested by the Commissioners. The districts into which lines were not projected complained that other districts were to profit at their expense. There were complaints even within the districts proposed to be opened. The *mean* course of the line, drawn with an eye to general interests, was unsatisfactory to those who looked to their own districts

merely. On the one hand, the promoters of private adventures in railways raised against the Commissioners the Cheap-John cry, "Speculation is the foundation of British glory;" and, on the other, the charge of having monstrously underrated the dividends that might be expected to be obtained from railways in Ireland. They were doubly terrified—lest the game should be taken out of their hands; and lest, supposing it left in their hands, it should be spoiled by the public accepting the conclusions, as to the probable dividends, of impartial persons so eminent as the Commissioners.

The scheme was not, however, without strong support from the public, especially in Ireland. The Report, as it came to be comprehended, rose gradually, but surely, in the estimation of competent and impartial judges. Resolutions in favour of Government action in furtherance of the recommendations of the Commissioners were passed in meetings in Dublin, in several of the larger cities, and in various country districts. A great body of the Peerage, headed by the Duke of Leinster, got up an address to her Majesty, praying that the Report should be taken into serious consideration:—

"MOST GRACIOUS SOVEREIGN,—We, your Majesty's most dutiful and loyal subjects, being deeply interested in the prosperity of Ireland, and deeming it of the utmost importance to her welfare that the Poor-Law Act of the last session of Parliament should be followed, in the next, by measures for the general improvement of the country, most respectfully solicit your Majesty's gracious attention to the subject.

"It is not for us to specify particular undertakings, but we beg leave to express our anxious hope that the report recently made on railway communication in Ireland may be taken into serious consideration.

"We do so under the persuasion, that the promotion of works of public utility in Ireland would not only prove one of

the safest remedies for her wants, but by encouraging commerce and increasing her means of contributing to the exigencies of the state, must essentially benefit all parts of the empire."—*November* 1838.

This address was signed by the Duke of Leinster, the Marquesses of Headfort and Clanricarde, the Earls of Meath, Arran, Courtown, Miltown, Clanwilliam, Mount-Cashel, Clancarty, Gosford, Rathdowne, and Listowell; the Viscounts Southwell, Haberton, Lismore and Gort; and the Lords Kinsale, Louth, Riversdale, Cloncurry, Clonbrock, Rossmore, Wallscourt, Dunally, Bloomfield, Fitzgerald and Vesci, Carew, and Oranmore. The list included noblemen of all parties. In fact, the passage of the Poor-Law Bill, throwing on Irish property the support of Irish pauperism, had in a day done more to quicken the benevolent instincts of the proprietary classes than a century of reasoning and preaching could have done. They were become genuine and hearty advocates for the improvement of the masses. This was so far favourable. The private adventurers on the other side of the Channel, backed by the Tory opposition, were, however, to render nugatory this new-born zeal of the Irish nobility.

The Government were most anxious to carry out the scheme. On March 1, 1839, Viscount Morpeth, in the House of Commons, moved the order of the day for a Committee of the whole House on the Railways (Ireland) Commission. The House was not allowed to go at once into Committee to hear the intentions of the Government. Mr Lucas had to complain of the time taken in maturing the Government plans. The delay, he said, had been most injurious to the private projectors of railways in Ireland. He had farther to state a variety of suspicions as to the motives and proceedings of the

Commissioners. Mr Hodgson Hinde had to suggest that the whole scheme was a device to please O'Connell. Mr O'Connell had to deny that he had been consulted; and Lord J. Russell had to epitomise the history of the Commission in order to demonstrate the purity of the Government intentions. When the House at last went into Committee, Viscount Morpeth, in a very able speech, explained the scope of the Report, and of the measure founded by the Government upon it. The main feature of the measure was, that it proposed that the lines of railway recommended by the Commissioners between Dublin and Cork, with a branch to Limerick, should be executed as public works,—the management to be vested in the Board of Works, with power to the Treasury to render such assistance as might be requisite. His lordship concluded by moving, "that Her Majesty be enabled to authorise Exchequer Bills, to an amount not exceeding L.2,500,000, to be made out by direction of the Lords Commissioners of the Treasury, and to be by them advanced for the construction of a railway or railways in Ireland, the sum so advanced being secured, and the interest and sinking fund to be secured, on the profits of the works, the deficiency, if any, being provided for by an assessment on the several districts through which such railway or railways may be carried or which may be benefited thereby." The motion having been seconded by Mr Redington, Sir Robert Peel rose and attacked the measure with those "saws of poor Richard" which are ever ready to be employed against such measures when proposed by Government. If the railroads would pay, then they would be made "by the spontaneous exertions of the private capitalists of Ireland." If they would not pay, how unfair was the proposal! In any case, let them consider the injury they would inflict on the capital

already "trustingly" invested in the internal communications of Ireland (a consideration which would for ever have prevented the introduction of railways, not in Ireland only, but England and all over the world). If he could be convinced that the measure was for the permanent good of Ireland, he should not oppose it; but if it was a mere adjunct and aid to the new Poor-Law system, he was convinced that if it did not work harm it would work no permanent good. Then, where were they to stop? If they made one line, they must make several. In short, it ought to be decisive against the measure that it opened a prospect of a *national* system of railways—of Government doing what should be left to the private companies.

A long debate followed, in the course of which several excellent speeches were made. On a division, 144 voted for the Government scheme, and 100 against it. This was a triumph. But the Administration was tottering, and the Bill was destined to make no farther progress.

The opposition was to be fatal to the designs of the Government. Lord Brougham, in the House of Lords, on the 7th of March 1839, in presenting petitions from two places in Tipperary in favour of promoting railways in Ireland, took occasion to make a fresh display of his unremitting hostility to this and every other Government project. "Having presented these two petitions," he said, "from the respectable persons who had signed them, it was but fair for him to state, that although he approved of every facility that could possibly be given for the construction of railways in Ireland, yet that he should most decidedly oppose any attempt to obtain from this country a grant of the public money for that, in his opinion, most unjustifiable project—very unfit to be carried into effect without any undue pressure either

for it or against it; highly unfit to vote money for it, to go to a country to which it would not naturally go—contrary to every sound principle of national legislation—and very likely, in any country, to be made the means of practices which were called jobs. Therefore he gave notice that he would strenuously oppose any such effort," &c. &c. On the 21st March, Mr French, in the House of Commons, on a motion for an address to Her Majesty to direct measures to be taken to secure to every province in Ireland the advantages of railway communication, made a speech partly favourable, partly adverse, to the Government measure. The House was counted out. On April 12 the Marquis of Lansdowne, in the Lords, presented two petitions from Kerry in favour of a general and uniform system of railways for Ireland. He was indignantly assailed by the Duke of Wellington. On the 23d July Mr French renewed his motion in the Lower House, and made an elaborate, eloquent, and convincing speech in support of it. The House was again counted out. "The last of the subject" was a motion by the Irish Attorney-General on Irish railways made at the close of the session; but what the motion was is unrecorded. The House was counted out. The Government measure was heard of no more. Owing partly to the Tory opposition, and partly to the indifference of Parliament, the Commissioners' Report was let down into the great limbo of *tertium quids*, where lie the majority of Blue Books, the costly records of the zeal and ability of public servants turned to no public account.

It would be too much to say that there was nothing in the "saws" with which Peel and others opposed the Government measure. Questions involving the proper limits of State action will to the end of time be subjects

of dispute, and are never well settled except by experiment. Every one assents to the proposition, that the State should not interfere in any matter which can be managed with equal or greater advantage by the people themselves. Such questions are by this assent, however, postponed, not solved; for, in any case that arises, the real difficulty is to decide whether the matter may be managed more beneficially by State interference than by the spontaneous action of society. The decision must turn on an appreciation of the whole circumstances of the case; an appreciation which should include the secondary and more remote consequences of interference on the one hand, and of *laissez faire* on the other. This appreciation is necessarily a highly difficult and complex business; and in every inquiry, in proportion to the complexity of the circumstances is the multiplicity of points for disagreement among impartial persons. But points of honest difference, round which respectable, but opposite, reasons conflict, are precisely those of which no settlement is possible short of experiment.

In the case of the railways the question was less difficult than in most of the cases in which the limits of Government interference fall to be discussed. It was not a question between State interference and *laissez faire*, but between complete State interference and partial. The private companies were obtaining from the State important rights over private property, and practical monopolies of the locomotion of the country. They were the creatures of the State as well as of private enterprise. The true question was as to the propriety of endowing them with so much power and independence; it was whether the railway system should be allowed to grow up at haphazard, according to the whims of private

adventurers (men not unfrequently resembling the promoters of "The Glenmutchkin Railway," in Aytoun's admirable burlesque), or should be developed according to some well-considered scheme, laid down by Government. Before this question was, or could have been, propounded in England, the adventurers had already got the railways to a great extent into their hands. There were powerful vested interests, and correspondingly powerful prejudgments of the question.

By the close of 1838 the question was agitated in numerous pamphlets and newspaper articles, in most of which objections were urged to the proposals of the Commissioners. The objections are ably reviewed, and rebutted by general reasoning, in an article in the January number of the "Quarterly Review," 1839, which may have been written by, and would have done credit to, the late Mr Senior. A quotation from a pamphlet noticed in that article will show what the leading objection was:—

"The plain common sense way of dealing with the subject is to try each proposed line of railway simply by itself, and, if it should appear a useful and a profitable speculation, to permit it to proceed on the assurance, that when the capitalists gain the country cannot lose. If this principle had been followed, railways would, no doubt, have been formed in many parts of the country [*i.e.*, of Ireland]. . . . It pleased, however, our Government to think otherwise. A commission was appointed to drill the capital of the country into a uniform and regular system of expenditure, to lay down a vast and comprehensive system of railways, *the merit of which confessedly rests on its execution as an entire*, and in the meantime to compel those who wish to embark their money in railway speculation to take up detached portions of this great system, which its authors only allege to be profitable when complete. This is the germ of all the practical suggestions of the Report; and we

hold that never was there a more absurd or mischievous attempt than thus to stretch mercantile enterprise on a Procrustean bed; we scarcely use the language of figure: if we do, it is of a figure which is unavoidably suggested by a single glance at one of the maps as it is intersected by the lines prepared by the Commissioners. The dotted lines, the black lines, and the red lines, crossing each other in every direction, seem almost like the diagram of a rack upon which the Commissioners are to bind and torture the enterprise of Ireland. Prometheus, upon his rocky bed, was not bound in more rigid fetters; and perhaps, to complete the simile, there is not wanting the emblem of the vulture that preyed upon his vitals."

"The plain common sense way," advocated by this vigorous writer, prevailed. The important question was decided in favour of the adventurers. There is no longer any occasion to consider the question speculatively. It has since been distinctly settled by a disastrous experience. Mercantile enterprise, instead of being fettered, was left free as the pig in Coleridge's stanza—

"Down the river did glide, with wind and with tide
A pig with vast celerity,
And the Devil looked wise as he saw how the while
It cut its own throat; 'There,' quoth he, with a smile,
'Goes England's commercial prosperity!'"

We may see the results in Ireland from the subjoined tables, prepared by Dr Hancock, and exhibited to the Statistical and Social Inquiry Society of Ireland, 24th April 1866.*

* For Dr Hancock's observations on these tables and suggestions as to the mode of dealing with the Railways, see Appendix V.

THE FINANCIAL POSITION OF IRISH RAILWAYS.

Classes.	Last quoted price for £100 of shares:	Mileage.	Dividend last half year before April 1866.	Dividend per cent. on average of 3 years before April 1866.
	£ s. d.		£ s. d.	£ s. d.
I. Class.				
Bankrupt or winding up.				
1. Banbridge Extension,	...	12	...	...
2. Bagnalstown,	...	21	...	...
3. Cork and Youghal,	...	...	...	...
II. Class.		33		
Stand-still.				
1. Athenry and Ennis,	...	36	...	...
2. West Cork, &c.,	...	17½	...	...
III. Class.		53½		
No dividend on some Preference Stock.				
1. Belfast and County Down (class E),	...	49	...	...
2. Irish North Western (class A and B),	...	86	...	...
3. Limerick and Foynes,	...	26	...	...
4. Londonderry and Coleraine,	...	36	...	...
5. Londonderry and Enniskillen (C)	...	60	...	...
6. Newry and Warren Point (6 per ct. & 5½)	...	6	...	...
IV. Class.		263		
No dividend on ordinary shares.				
1. Banbridge Junction,	...	7	...	...
2. Cork and Bandon,	...	28	...	...
3. Cork and Kinsale Junction,	...	11	...	...
4. Dublin and Meath,	...	35	...	...
5. Finn Valley,	...	13	...	...
6. Limerick and Castleconnel,	...	13	...	...
7. Limerick and Ennis,	...	25	...	...
8. Newry and Armagh,	...	21	...	...
9. Portadown, Dungannon, and Omagh,	...	41	...	...
10. Waterford and Kilkenny,	...	31	...	...
V. Class.		217		
Dividend less than the funds.				
1. Waterford and Tramore,	...	8	Nil.	0 18 0
2. Waterford and Limerick,	...	77	1 0 0	0 18 4
3. Cork and Limerick Direct,	...	17	1 10 0	1 18 4
4. Cork, Blackrock, and Passage,	...	6	3 0 0	1 18 4
5. Great Northern and Western,	...	72	3 0 0	2 15 10
6. Athenry and Tuam,	...	16	3 0 0	3 0 0
7. Midland Great Western,	...	245	2 10 0	3 14 2
VI. Class.		441		
Dividends less than commercial interest.				
1. Dublin and Wexford,	66 0 0	85	4 0 0	4 3 4
2. Dublin and Belfast Junction,	71 0 0	56	4 10 0	3 13 4
3. Dublin and Drogheda,	79 0 0	75	5 0 0	4 3 4
4. Belfast and Northern Counties,	82 10 0	100	5 0 0	3 16 8
5. Ulster,	86 0 0	65	4 10 0	4 13 4
6. Great Southern and Western,	92 0 0	387	5 0 0	4 10 0
VII. Class.		768		
Shares above par.				
Dublin and Kingston,	187 0 0	6	10 0 0	9 0 0

Dr Hancock in a single sentence gives the gist of these tables. "There are at present in Ireland three railways bankrupt or winding up; two at a stand-still; six paying no dividend on the preference stock; ten paying no dividend on the ordinary shares; seven, the dividends of which were less than those paid on the Government Bonds; six paying dividends at a rate less than that of commercial interest; and but one [the Dublin and Kingstown] the shares of which were above par." The result, put otherwise, may be stated to be, that in the whole system—if it may be called a system—of 1881 miles of railway, 566 miles appear as wholly unremunerative, while 1215 miles yielded an average dividend of 3·8 per cent. Proportioned over the whole system the dividends would average 2·5 per cent. In 1864 the percentage of the net receipts on the whole capital expended in the Irish Railways was, on a favourable estimate, 3·28 per cent.; and it may now be assumed to be considerably lower.*

The views and the fears of the Commissioners have been verified to the letter. Some of those who derided their low estimates of probable dividends; who scoffed at a system which would, on certain conditions, pay *as a whole*, and yet not pay in pieces; may have lined their pockets with parliamentary and engineering expenses: but the unfortunate shareholders in the Irish Railway Companies have in many cases been ruined.

The state of the railways, under the private adventure system, in England and Scotland is a little better; yet few of the railways, regarded merely as properties,

* See Tables appended to a paper on the condition of the Irish Railways, by Joseph T. Pim, Esq., in Part XXXIII. (April 1867) of the "Journal of the Statistical and Social Inquiry Society of Ireland."

i.e., from the shareholder's point of view, are in a wholly satisfactory condition. Moreover, the dishonesty of railway management has been so gross, no shareholder can feel secure against some sudden revelation of politic fraud and concealment by his chairman and directors; can, at any moment, feel certain that his railway stock—where not paid up—is a property yielding dividends, and not merely an obligation to pay debts and calls.* Regarded as affecting the interests of the

* Recent flagrant exposures of chairmen and directors of railway companies, make it unnecessary to adduce proof of the statement in the text as applicable to the present day. How things were ten or twelve years ago, may be learned from the subjoined extract from Mr M'Culloch's "Commercial Dictionary," edition of 1857, article *Railroads*:—"The vast expenses which many companies have incurred in overcoming the opposition to their undertakings, and in the construction of their lines, occasioned an outlay, which, if it were to be met at all, could only be met by enforcing the severest economy in the management of the lines. . . . . And, in the case of railways, the interests of the engineers and others engaged in their management are usually opposed to those of the companies; so that it would be idle to expect that the affairs of the latter should exhibit any considerable portion of care, vigilance, and economy. The recklessness, too, with which the directors of the great or leading railways have engaged in subsidiary undertakings, or in the construction or purchase of branch lines, many of which have been attended with heavy losses, have had a powerful influence in depressing the value of their property. For a while, too, all railway companies suffered more or less from the discredit and suspicion which, however undeservedly, have attached to railway boards. It was found that some leading directors, in whose sagacity and honesty the public reposed all but unlimited confidence, had been in fact nothing but gigantic swindlers; their sole object (in which it is to be hoped they have been disappointed) having been to enrich themselves by defrauding their constituents and the public. And these disclosures also showed that, if the boards of directors associated with the parties now referred to, did not actively assist them in their fradulent schemes, they, at all events, opposed no effectual obstacle to their

public, on the other hand, the railway monopolies in Britain are seen to be, yearly, becoming more and more formidable. The progress of the amalgamations which have recently set in, owing to the disastrous consequences of the system of private war long carried on by the companies against one another, may well justify alarm. Mr Joseph Mitchell, C.E., has called attention to this in a pamphlet in which he advocates the assumption of the railways by the State. He says—

"Till lately, there was almost no company but was at war with some other or others to preserve the property it had acquired, or improve it by aggressions on adjoining lines. Hence serious and wide-spread loss and ruin had been sustained by the holders of railway stock, through the sudden fluctuations in its value. Indeed, had not the traffic greatly increased, and the competitions been to some extent abated, the value of railway property to shareholders must have been almost wholly destroyed. But these contests have now been felt by several of the great companies to be suicidal.

"Prior to 1860, and ever since, with a view to self-protection, the directors of companies have entered upon and carried out a system of amalgamations, contracts of lease, and reciprocal facilities for joint-working. And they have so combined, that thirteen great companies now divide among them almost the whole carrying business of the country. Already the London and North-Western Company extends from London to Carlisle. The Caledonian and Scottish Central, which are about to be amalgamated, will, when united, regulate the traffic from Euston Square to the extreme north. The Midland, the Great Northern, and the North-Eastern, seem destined to unite in a

development. Hence the just discredit that has attached to most railway companies. Some of them put forward detailed statements of their affairs; but these, how accurate soever, obtained but little confidence. This ignorance was, however, alike prejudicial to the public interests and to those of all really well-managed companies, and was at once an incentive to and a cloak for all sorts of nefarious practices."

great company, extending from London to Edinburgh, and embracing all the central districts of England. The Great Western, which already has spread its ramifications into Wales, and which extends northwards to Manchester and Liverpool, will naturally ally itself with the Bristol and Exeter, and embrace Cornwall. On the other hand, the South-Eastern, now damaged by competition, is certain to amalgamate with the London, Chatham, and Dover; and the union of the Brighton and South-Western is not improbable. If things are allowed to take their course, we may expect that ere long three or four great companies will have in their hands the whole railway system of Great Britain.

"As competition injures, and has injured, the proprietors of railways, so must amalgamation, in its present form, prove detrimental to the public."*

The following extract, from the same pamphlet, gives an idea of the condition of railway property in Great Britain :—

"Though the traffic of the country has greatly increased, railway property is still unremunerative. The Great Western, with its magnificent works, which at one time yielded 8 per cent., yielded in 1863 but one-half, and is now yielding only 3½ per cent. The Great Eastern yields but L.1, 17s. 6d. per cent.; the London, Chatham, and Dover yields no return whatever. In 1862 the London and North-Western shares were at 6 per cent. discount; till lately the shares of the North-Eastern were quoted at a discount of 30 per cent.; and were there perfect confidence in the ultimate value of railway property, this line, from its last dividend of 6¼ per cent., should be quoted at 25 premium, instead of 11 or 12, the present market price. Even the Chairman of the Manchester, Sheffield, and Lincoln—who so eloquently opposes Government interference with railways—pays only a dividend of 2½ per cent. to his shareholders, while he proposes to them a loan

* "Plan for lessening the Taxation of the Country by the assumption, &c. of the Railways of Great Britain and Ireland by the State." London: 1865.

of upwards of a million sterling to better his condition, but apparently throwing good money after bad! In Scotland the whole of the railways on the east coast, from the northern borders of England to Elgin, are almost wholly unremunerative, while the few lines in the south-west that pay a dividend are apparently about to sustain serious damage by new schemes which their directors contemplate for self-protection."*

These results sufficiently discredit "the plain common-sense way" of dealing with railways which was preferred to the recommendations of the Irish Commissioners and of many public officers in England. Other consequences, however, of the private monopoly system are still more conclusive of the fact, that neither the public nor the capitalists have fared so well as they would have done had the railways been placed under more complete Governmental control.

Mr Edwin Chadwick, in a recent publication on the subject of railway reform, supplies us with the means of comparing the state of the railways in this country, and in those in which they were undertaken by the State, or at least not left to private companies. He says that at the outset of the new means of communication, he, in common with other public officers, advocated in England the views which the Irish Commissioners so

* "The shares of the Edinburgh and Glasgow are now at 80 to 84, a discount of from 16 to 20 per cent.; those of the North British are at 55, a discount of 45. Yet these companies contemplate laying out about two millions in bridging, by stupendous works, the Forth, and competing for the traffic to Perth and Dundee, to which there are two lines already. The Caledonian, a few years ago, compounded with its creditors. It has now recovered tone again through better management and an improvement in traffic. But being obliged for self-protection to amalgamate with the Scottish Central, it plans a new and shorter line between Edinburgh and Glasgow, between which there are three lines already, besides the Union and Clyde and Forth Canals!"

earnestly desired to have carried out in Ireland. They objected to giving up to irresponsible private speculators the public highways and means of communication as sources of private enterprise and profit, and urged that the Government, on behalf of the public, should determine upon the lines, provide the capital for their construction, and put them up for competition to construct, maintain, and work responsibly:—

"Much of this course has been taken in Belgium, Wurtemburg, France, Switzerland, and other continental States. Now, let us consider the position of the simple shareholders. In England, the net receipts, less interest on preference shares and loans, is even now under 4 per cent. on ordinary share capital;* and the shareholders would have gained largely if they could have kept their money in Government securities. In Belgium, the net profits on the Government and private capital expended, average nearly 5½ per cent.; in France, more than 6½; in Prussia, 7½, with fuel and iron much dearer. But let us look at the results to the public. It may be stated that in England, the average fares for 100 miles are—for first-class passengers, 15s. 10d.; the second class, 11s. 6d.; third class, 7s. 6d. In Belgium, they are for the first class, 6s. 6d.; the second class, 5s. 6d.; for the third class, 3s. In France, they are 13s. 6d., 10s., and 7s. respectively; and in the German States somewhat lower. But it is reported by Captain Galton and generally admitted, that their third class is generally as good as our second class, and their second class as our first. Then, as to security, it is proved by the returns, that in France travelling is seven times, in Belgium nine times, and in Prussia sixteen times, less dangerous than in England . . . . On official inquiry into the causes of our railway accidents, more than nine out of ten have been pronounced to have arisen from causes under control, from want of discipline, from insufficient

* In 1853, and again in 1859, the dividends derived from the railways in Britain were calculated not to amount, on the average, to 3 per cent.—"M'Culloch's Commercial Dictionary," editions of 1857 and of 1859–60. Art. *Railroads*.

regulations, or from the misplaced parsimony of the directors or the superior officers; in other words, from inferior administration. Whatever we may be as regards the past means of communication in this country, in respect to those immediately available, we are slow, and dear, and not safe."*

* "Address on Railway Reform. By Edwin Chadwick, C.B." Lond. 1865. Mr Chadwick's pamphlet, like most of the productions of his pen, is a very able paper, and well worthy a careful perusal. Mr Galt's "Railway Reform," Lond. 1865, is a more exhaustive discussion of the whole question raised, but, necessarily, merely skirted in the text. Any one who desires to form a judgment on this, which has recently again become a question of public interest (owing to Mr Gladstone's foresight in 1844, in reserving to Government the right to purchase, on certain specified terms, all the railways in the United Kingdom that from that time should be constructed), will find abundance of materials in Mr Galt's book, taken along with Mr Francis' "History of the English Railroad," Lond. 1851. As bearing on this question, I annex an abridgment of a letter, dated January 25, 1867, from M. Corr-Vander Marren, a Belgian official, to the Chairman of the Edinburgh Chamber of Commerce:—"The telegraph in Belgium is, like the Post-office and the principal lines of railway, worked by the Government, under the direction of the minister of public works. It was first introduced by an English company, who obtained the concession of the line from Brussels to Antwerp. The Government afterwards purchased the Antwerp and Brussels line, and planned a general system of telegraphic lines all over Belgium. The tariff established by the State at the outset was calculated by dividing the country into three zones, and fixing the rates respectively at 2½ f., 5 f., and 7½ f. for twenty words. As the use of the telegraph increased, the tariff was reduced time after time until the 1st December 1865, when the rate of ½ f. for the whole of the country was introduced. Previous to the 1st December 1865, the tariff for simple telegrams of twenty words was fixed at 1 f. The first month, December 1865, produced an increase upon the corresponding month of 1864 of 102 per cent. on the number of telegrams, and of 15 per cent. on the produce. Taking the whole of the year 1866, we find the increase, as compared to 1865, as follows:—

1865—Number of telegrams, 332,721: produce, 345,289 f.
1866— „ „ 692,536: „ 407,532 f.

In the figures for 1865 there is one month's application of the

We have thus been taught by experience a lesson which we would not otherwise learn, that to railways, at least, the principle of *laissez faire* is wholly inapplicable. Mr Drummond's benevolent scheme for the improvement of the masses of the Irish was destined to be thwarted through British selfishness and obtuseness. Its results at least were lost when, by his untimely death, the genius that had conceived and directed the project was withdrawn. Some of those who were foremost in opposing him are now, I am assured, the most clamorous for the purchase by the State of the Irish Railways. It is the old story,—the good that might have been done can only be conjectured,—the evil that might have been averted we must suffer as best we may.

reduced tariff. Upon the other hand, the incessant permanent increase of 17 per cent. in the telegraphic correspondence must be considered. The real figures to be compared are the following:—

1865—Supposed traffic, if no reduction had taken place in December, 320,000 telegrams: produce, 352,000 f.

1866—Supposed traffic, if no reduction had taken place that year, 374,000 telegrams: produce, 411,840 f.

1866—Real traffic by ½ f. tariff, 692,536 telegrams: produce, 407,532 f.

"As is here shown, the produce of the receipts of 1866 at the reduced tariff of ½ f. are, in reality, about the same as had been previously obtained at the 1 f. tariff. This may be considered a most favourable result, particularly when we take into account the deplorable state of prostration into which all commercial transactions were thrown in 1866. The Belgian Government has worked out the telegraphic system with great advantage to the country. The telegraph has not only paid off the whole of the cost of its plant and construction, but its tariff has been gradually reduced; and the people of Belgium are now enjoying, at less cost than any other country in Europe, the full advantage of this splendid invention. I have no doubt that in the course of two or three years the increase in the number of telegrams will bring back the profits to an extent which will justify further improvements."

The two and half millions which were wanted for testing the scheme were refused. A few years later, appalled by the magnitude of a calamity which, springing suddenly out of the unremedied and increasing evils of Irish society, prostrated all at once the Irish people, we hastened to fling away more than three times the sum in an effort to relieve our feelings of horror and distress. This money, which timeously and properly applied might have established Ireland in prosperity—which applied, as Lord George Bentinck proposed, even at the time of the famine, in the construction of a system of railways, would have permanently benefited the country —was wasted on unnecessary public works; in making roads that were not wanted; in making roads to and from gentlemen's houses; in making roads that began nowhere, and led to no place; and in drainage works, which, where they were completed, permanently benefited not the poor people, but the landed class. A large amount of the money was jobbed; and the real relief-fund of the poor—to their honour be it stated—was that which was administered by the Society of Friends.

The following extract from the report of the Irish "Social Inquiry and Statistical Society" for the year 1865 may fitly close this chapter:—

"The character and conduct of the railway system must manifestly affect most materially our social and industrial future, and the arrival of the period appointed by the Legislature for the possible intervention of the Government, concurring with the financial difficulties of the great majority of the companies which regulate the lines, and complaints, arising in various quarters, coerce consideration of the mode of their management, and raise the issue whether it has not been in many respects erroneous and unhappy. When we find that two Irish railways are bankrupt, that others have ceased to work, that some pay

no dividends on their ordinary shares, and some no dividends at all, it cannot be improper to reflect on the causes which have led to those results, and the possible remedies for such serious mischiefs. It seems necessary to inquire whether the application of the principle of *laissez faire* to corporations which are necessarily monopolists, unaffected by the ordinary influences of wholesome competition, was not a great mistake; whether the supervision of Government should not have been applied, as in continental nations, in mapping out the roads and regulating the use of them; whether it is unavoidable that in one of the poorest countries of the world the rate of traffic should be higher than in some of the most prosperous; whether an experiment should not be made for testing the capabilities of our railways more successfully to assist in the expansion of our manufacturing industry, in the development of our mineral wealth, in the improvement of our cattle traffic, and in the enlargement of the opportunities of cheap and convenient locomotion, which will increase for the masses of our poor people the facilities of intercourse with each other and their neighbours beyond the Channel, with all the advantages of the habits of punctuality, energy, and enterprise, which are eminently promoted by a well-ordered and largely available railway system. And if it should prove that this experiment is beyond the power of individuals or trading companies,—if they cannot be induced to sacrifice present profits, though with the fair prospect of augmented gain in the future, from changes which will certainly work great advantage to the community at large,—the question will occur, whether a special case has not arisen for the assistance of the Government, and whether, either partially or universally—permanently or for a time—by tentative endeavour or the adoption of a settled policy of regulation and control, which has had great advocates and great results elsewhere—it should not attempt to rectify the evils which undoubtedly exist, and secure the advantages which, without its assistance, may be long delayed or wholly lost to Ireland. And this all the more, if it appears, on careful inquiry, that imperial advances may be more than repaid by local returns; and that, according to all experience, the wonderful power of

development in railways, under wise and liberal supervision, may be trusted to justify any present effort and outlay which the State may find needful, to remove the obstacles by which it has heretofore been opposed. On these pregnant queries, the pending investigation and the declaration of the intelligent opinion of the country will enable Parliament safely to pronounce; and it should not forget, in reaching its conclusion, that, thirty long years ago, the subject was considered by a commission under the presidency of Thomas Drummond, one of the ablest administrators and the truest men who have ever had to do with public affairs among us. An Englishman who, like many of his race, clung fondly to Ireland, as, in the words of Burke, his 'adopted and his dearer country,'—he perished in his prime, labouring overmuch for a people who mourned in him their friend and benefactor—

'Untimely lost
When best employed and wanted most!'

The Commission of which he was the head, in one of the most remarkable reports ever submitted to Parliament, protested against the formation of unregulated and unchecked monopolies, and anticipated, with a sadly truthful prescience, as the results which might flow from them, the very evils we are now driven to remedy—the waste of national wealth and the defeat of industrial enterprise, in operations practically unproductive, the maintenance of fares at too high a rate, and the existence of many inconveniences which corporations clothed by the law with authority, to a large extent irresponsible, cannot be compelled to mitigate or remove. It is remarkable that, after the lifetime of a generation of men, we should be trying back upon the courses which were indicated so clearly as those of safety and profit by the Commissioners of 1837. Their advice did not prevail. It was accepted by the Government, but failed to receive the approval of the Parliament of the time. A tottering Administration sought to give Ireland the benefit of its suggestions; but the Opposition was roused to resistance by the expectant premier, and it succeeded in defeating the measure of those whom it sought to supplant, and to whom it grudged

the credit of any great achievement. Still, if in the circumstances in which we find ourselves we see reason, from large experience during the lapse of so many years, in the Old World and the New, to believe that the rejected counsels of Thomas Drummond and his fellows did not command the attention to which they were entitled, we may look back with interest to the record of the Parliamentary struggle which they originated, and trust that, hereafter, some other man may take the place of one whose rich and genial eloquence, not unknown to this society, was then, as often before and after, employed to advance the interests of Ireland."

CHAPTER XVIII.

SIDE OCCUPATIONS; IRISH MUNICIPAL BOUNDARIES COMMISSION; ABOLITION OF THE HULKS AT CORK AND DUBLIN; SUPPRESSION OF SUNDAY FAIRS IN THE PHŒNIX PARK.

IT is convenient to place in this short chapter, as in a siding, some facts that fall to be recorded, and that are yet not easily disposable on the main line of the narrative. They all belong to the close of 1835 and beginning of 1836, that busy period in which most of the improvements in the justiciary of Ireland were considered and executed, or initiated.

Mr Drummond was employed on the Irish Municipal Boundary Commission, and he was a chief agent in effecting the abolition of the hulks at Cork and Dublin.

"In 1836 the Bill for Municipal Reform in Ireland was introduced into Parliament, and it was necessary that several boroughs should be visited, and boundaries fixed on for them. Mr Drummond had been employed on the similar Bill for England, and he entered warmly into the subject now, but confided its execution to Captain (now Lieutenant-Colonel) H. D. Jones, and twelve other officers of Engineers. The instructions were drawn up by Mr Drummond, and they contained the peculiarity of fixing a time at which the reports and plans should be completed. It may also be added, that so fully was the energy of his spirit felt, that this commission exhibited the still greater peculiarity of being complete by the time appointed, and for a smaller sum than had been estimated as

its expense. Mr Drummond's personal attention was, of course, directed to the political principle of this remarkable Bill, being one of those most vexed by party; and it may perhaps be remarked, that its tendency to localise and distribute power appears to have been somewhat overlooked by a recent writer, when he elsewhere dwells on the general effort of the present Government of Ireland to develop the Norman as opposed to the Saxon principle of the constitution. To the former principle the habits of a soldier may naturally be thought to incline, and so far, therefore, as the opinions of a subordinate may influence the guiding power above him, Mr Drummond's weight was probably felt in centralisation, but he was too well read in mediæval history to slight the influence of municipia."*

The abolition of the hulks is thus referred to in Mr Drummond's evidence before the Roden Committee:—

"The nature of the convict service in Ireland came under the Lord Lieutenant's observation, I think, some time in the year 1836. It appeared to him that it was a very injurious system to keep prisoners confined for a length of time on board the hulks, which formed a most imperfect prison, and did not admit of that attention to classification which a prison on shore allows; and, finding upon inquiry that it would be quite practicable to carry the sentence of transportation into immediate effect in almost every instance, he thought it would be very desirable to abolish the hulks altogether. This was carried into effect after considerable trouble. . . . . The prisoners are now conveyed directly on board the transport vessels; by which, in addition to other beneficial details, a saving of about £8000 a-year has been effected."

It would not be gathered from this that Mr Drummond himself was a chief agent in effecting the economical improvement. General Larcom, however, states that it was among the earliest objects which engaged his attention in Ireland; adding, that in the work of carrying it out "he was ably assisted by Captain

* The Larcom "Memoir," p. 14.

Brandrith, R.E., who, with instructions from Lord John Russell, was sent to Ireland for the purpose. Captain Brandrith was strenuously supported by Mr Drummond, and on his report and plans, it is believed, the system was abolished, and that which prevails was substituted."

The following account of the suppression by Mr Drummond of the fairs that formerly used to be held on Sundays in the Phœnix Park is supplied by his sister:—

"On the Sunday afternoons and evenings crowds used to assemble in the Phœnix Park. Drinking booths were opened, and few Sundays passed without riot and mischief ensuing. My brother talked over the matter with some friends, who told him he must not dream of interfering, because it was a very old custom, and it would not do to attempt to put it down. He resolved, however, that he would make the attempt; so one Sunday afternoon, the people having assembled as usual, and the booths being erected, he rode out unattended among the crowd. To the keeper of the nearest booth he represented the consequences of the meetings—drunkenness, brawls, fighting, and then punishment; he said these things were to him very painful, and that it would give him great satisfaction could the meetings be altogether given up. The man immediately, without a word of remonstrance, complaint, or even a show of sullenness, set about packing up. He quickly left the grounds, and never returned again. The same result followed at other booths, and in a short time the park was cleared, and the 'old custom' given up for ever."

There is some evidence, however, that he did not leave the result to depend altogether on moral suasion. As Ranger of the Park, he issued placards prohibiting the meetings; and, for several successive Sundays, he massed the police in considerable force in the neighbourhood of the Park to make effectual the prohibition.

CHAPTER XIX.

MR DRUMMOND'S LIFE IN IRELAND; HIS CORRESPONDENCE; HIS HEALTH; VISIT TO THE CONTINENT; PRIMING THE HEADS OF THE IRISH GOVERNMENT IN PARLIAMENT; THE RODEN COMMITTEE; VISIT TO EARL SPENCER; PLANS FOR THE FUTURE.

FROM the day of his arrival in Ireland, in 1835, Mr Drummond was, with one short interval, absorbed by public business. His letters to his mother and sister, formerly so full of the details of his occupations, suddenly became for the most part mere apologies for not writing more at length. He found time, indeed, as his marriage approached, to open his heart very fully to his mother in a short series of long letters: his home correspondence after his marriage may be described as a long series of short letters. He wrote home once a-week; the fulfilment of this obligation to the home-folk continuing to the end to be with him an imperious necessity. The details which he now had no time to communicate were very regularly supplied by his wife or by her mother-by-adoption, Mrs Sharp, who lived in family with them.*

* The month after he arrived in Ireland the meeting of the British Association was held in Dublin. "In the din of politics which now echoed round him," says Larcom, "he found an atmosphere uncongenial to his former studies, and he was seldom seen among the men whom he had formerly esteemed the most."

Shortly after his marriage, he seems to have been unusually busy, and for a short time even remiss (judged by his former practice) in writing to his mother. The following letter, in which this remissness is explained and apologised for, is very touching, and is but one of several which show the strength of the filial affection in the man :—

"DUBLIN CASTLE, *April* 13, 1836.

"MY DEAREST MOTHER,—For the last five weeks I have travelled daily between this and Bray with a small packet of your letters in my box, in the hope of being able to clear off the superincumbent load of official matter, and then of sitting down and sending you a chit-chat letter. Unfortunately this box never empties, and it requires unremitting exertion to keep down the mass which is constantly flowing in. I have been obliged to entreat Mrs Sharp to tell you of our proceedings; but of yours? No note from you or John has come to me for a long time. Are you offended with me, my dearest mother? I confess you have some reason to be so; but you would not be very angry could you see how I have to *slave*. I sent you all the Dublin papers respecting the society,* not so much with a view to your reading about a controversy of which you care nothing, as that you might see how intensely I have been occupied, and might make some allowance for my not writing. But why, my dearest mother, when I sent you the papers, not a word from *you*? You must be very angry when you did not say a word on such a subject. That letter† occupied a

* The reference here is to the Royal Dublin Society—a body of some importance in Ireland. It is a Society for the promotion of Arts, Agriculture, and Manufactures. At the date of this letter a controversy was being waged as to a reform of the constitution and proceedings of this Society. See next note, *infra*.

† The letter referred to is dated 17th March 1836, and was published in the *Warder* of March 26 in that year. It is a very long letter, occupying nearly two columns of the newspaper, and is conversant with the new regulations of the Royal Dublin Society. It

great deal of time, because it required a good deal of previous investigation; and all that was to be done over and above the usual business of the office, which was severe enough. However, I mean to adopt a different system, not to attempt a long letter, but to write you a scrap every Sunday; and, if you do the same, we shall keep up a regular though brief communication. So, my good, dear angel mother, pardon all that is past and let us begin a new score. Believe this, that a day never passes without my thinking of you all, when I am dressing or riding for the exercise which is absolutely necessary to keep me alive. So write to me, my dear mother, and let me see your beloved handwriting again, and pardon your son. I have been meditating—but whether I shall be able to accomplish it I can hardly say, but I think I shall—to run over for a fortnight and see you all, and to bring you and John back with me, if my dear Eliza could spare you for a time. My visit would be to her. Or perhaps it would be better to return with you and John, and the prospect of our all returning together would cheer her up; and when I left you she would not be so desolate. I think I shall be able to accomplish this if Lord Morpeth comes over soon. I am delighted Eliza was so pleased with her tippet. . . . . My poor, dear Eliza! this cold and cheerless weather must chill her languid frame sadly. I must try and get over to cheer you all up, and have a look at or a walk among the beautiful hills of Braid. . . . Adieu, my *ever dear* mother. Kindest love to my poor, dear suffering Eliza. I 'll come and see her and comfort her. Again adieu.—Yours ever affectionately,

"T. DRUMMOND."

The Under Secretary might well be excused the neglect of his private correspondence at that time. The

goes greatly into details with much comment and reasoning, showing the research and care with which Drummond entered into every part of his work, but it is not otherwise now of any interest. It was printed in the Transactions of the Society. It is also to be found in the House of Commons Papers. The subject excited much controversy and debate, and a Committee of the House sat for some time upon all the business of the Society.

preceding weeks had been full of excitements. The tithe commutation had not yet been carried; the substitution of service of process had not come into common use; and in various quarters a hot war was being carried on against the peasantry to levy the tithes by force. Into one parish in Munster alone the police, in a single week, accompanied four commissions of rebellion. Writs of rebellion, seizures and auction-sales for tithes, wholesale ejectments, were everywhere being enforced. Even these means did not suffice the tithe collectors. An incident in these weeks was the application to Government of Mr Talbot Glascock, attorney to the Dean of St Patrick's, for "the aid of the civil and military powers to effect the service of Exchequer processes upon some of the Dean's parishioners in the county of Kilkenny." The application—like many similar ones made at that time—was refused, on the ground that the Court might either substitute service or order the sheriff to assist in effecting it with whatever force might be requisite. The result was a correspondence between Drummond and Glascock—a rather eccentric person, well known in Dublin in his day—in the course of which Glascock's language grew very offensive. The correspondence is instructive only as showing the state of the tithe collection. Another incident belonging to these weeks was the blowing up, on the morning of April 8, 1836, of the statue of King William III. "of pious, glorious, and immortal memory." Rewards for the discovery of the perpetrators were offered both by the Government and by the Dublin Corporation, but without success. The destruction of the statue, following on the dissolution of the Orange Society, greatly alarmed and excited the Ascendancy; but those were probably not far from the truth who surmised that the act was

done by Orange hands, with the view of producing this alarm and excitement.

The visit to Edinburgh, projected in Drummond's letter to his mother of April 13, 1836, was frequently talked of afterwards, but was never paid. Every week, after the date of the letter, brought new duties and new ties to Ireland. About this time he was engaged in negotiations for procuring the appointment of the Irish Railway Commission. By October 1836 the work of the Commission was commenced; and thereafter, till the end of July 1838, there was neither rest nor holiday for the Under Secretary.

In the end of August 1836 his home was brightened by the birth of a daughter—an event marked by a letter rather longer than was now customary from him to his mother. Dr Johnstone, who is referred to, was the family doctor and the friend of Mr Drummond.

"DUBLIN, *September* 4, 1836.

"MY DEAREST MOTHER,—I send you a lock of your little grand-daughter's hair. Where it has got the colour I cannot tell, for it is neither like its father's nor its mother's. Poor little thing: it looks so gentle and innocent. Both mother and child go on admirably; and as to Mrs Sharp, she is always peeping at baby. Dr Johnstone said to her, when sitting by its little cot, 'You seem to be watching as if you were afraid somebody would run away with it.' . . . . Have you any fancy about the child being called after you? I have always considered my own name such an abomination that I should certainly never have a child called after me. My notion is to give them pretty agreeably-sounding names. Maria feels in regard to this as I do; and as we both agree with Walter Scott in thinking *Mary* the prettiest name on the list of female names, we are disposed to call it Mary-Elizabeth—the latter of course after you. Now, tell us honestly whether you have

any feeling on the subject, any desire that it should have your name alone, or that it should be Elizabeth-Mary. I like the sound Mary-Elizabeth rather better, so does Maria; but we shall be delighted to do what is agreeable to you if you have any wish on the subject. I am glad, very glad that you give a favourable account of Eliza, and that you look forward to a better winter this year than last. Kindest regards to my aunt, kindest love to my dear Eliza and to John, and believe me ever, my dearest mother, your truly affectionate son,

"T. DRUMMOND."

On two subsequent occasions, before the close of 1839, occurred the same grave difficulty of naming a child in the household of the Under Secretary.

No letters belonging to 1837 have been preserved; those belonging to 1838 are numerous. In January 1838 he suffered severely from an attack of influenza; in February he was teased by a hacking cough left by the influenza, and was obliged to pass the nights at Kingstown for the sake of the sea air. Occasionally he went to Kingstown to stay from the Friday night to Monday night or Tuesday morning, for the sake of the air, and to avoid seeing so many people as he otherwise would, and being obliged *to talk*. I imagine that the Kingstown visits were made also with a view to uninterrupted work at the Railway Report. He was, in these months, most busily engaged on the Report, eager to finish it, and pushing on with it despite of impaired health. By the end of February his cough was somewhat better; but he was much weakened by it and by overwork, which could not yet be relaxed. "Till the Railroad Report is finished," he wrote to his mother, March 11, 1838, "I shall always be hard pressed. After that I expect some breathing time. . . . Political events absorbed all our attention last week.

Great the interest and anxiety with which the intelligence was looked for here; great the triumph with which it was received by our friends. I think we are secure for the remainder of the session. The victory was greater than was anticipated. I hope and believe it will have the effect of setting us on our legs again.* . . . . I should have but moderate work if I had disposed of the Railroad Report. It is well advanced, in fact almost ready."

An idea of the completeness of his occupation by business in these months, may be gathered from the subjoined extract from a letter written, on June 17, 1838, by his wife to his mother. By this date the family had been for some time established at Kingstown, and a second daughter had been born.

"My husband is in Dublin *Railroadising*, so I know not whether he will be able to write a scrap to-day. . . . The sea air has certainly done him good; but he is very thin and very much older in appearance than when you last saw him. The railroad will, I trust, soon be over; but even his *every day* official business occupies him from nine in the morning till *a quarter to eight* (our dinner hour); so that any extra work brought on by any investigation must either be done before nine in the morning or in the evening after dinner. I often say that I might as well have no husband, for day after day often passes without more than a few words passing between us. *Now*, Dr Johnstone has forbidden his working after dinner; but then he must read the newspapers. Our dinner is not over till half-past eight, and half-past ten or eleven is quite late enough for a man who is up before six. From last Monday until this morning—a week all but a day—he never even *saw* his baby, although in the same house with her. . . . He manages

* The allusion is to the debate on the Ministers' Canadian policy, which, it was feared, might have ended in a defeat.

to get a peep at Mary for about five minutes every day almost, but he is on thorns even for these five minutes. . . .

"MARIA DRUMMOND."

In July 1838 the Railway Report was finished. But by this time the jaded Under Secretary was fairly worn out. His mother was seriously alarmed by the accounts she received of his health, and wrote at once to Dr Johnstone and to the Lord Lieutenant—to the former for his opinion, and to the latter entreating him to use his authority to make her son take a holiday. On the 24th July 1838 Dr Johnstone replied, stating that he had ordered Drummond off to Germany and Switzerland for a few weeks. "I feel quite certain," he said, "that the excursion will be attended with complete restoration to health. He is now better than when I last wrote, and wants to avoid going to the Continent, and merely to pay you a visit for a short time. On this subject, however, I have used all the authority of a doctor, and will not remit any part of his sentence. If he were to go to Scotland they would send for him from this the first difficulty that occurred to the Government."

A few days later Lord Normanby wrote to her as follows:—

"VICE-REGAL LODGE, *July* 30, 1838.

"MY DEAR MADAM,—I can assure you I enter most sincerely into your feelings with respect to your son's health, and I shall do everything in my power to induce him to take care of it, and to modify his zeal in the public service. The additional labour which he voluntarily undertook of superintending the Railroad Commission, has, I think, been too much for him; but the result will be as creditable to his talents as everything else in which he has ever been engaged. I hope I have arranged with him that, as soon as ever Lord Morpeth returns,

he shall take, at least, six weeks' leave, and make a tour upon the Rhine, where he must be quite out of the reach of any business. . . . —Yours very faithfully,

"NORMANBY."

A letter, undated, but belonging to an earlier date in the same month, from Mrs Drummond to her mother-in-law, was intended to cheer the old lady, and prevent her taking too gloomy views of the state of her son's health. It shows that the tour to Germany had not, at its date, been authoritatively prescribed by Dr Johnstone.

"MY DEAR MOTHER,—You will be delighted to hear that the horrid Railroad Report is finished. I suppose that the Commissioners will be assailed with all sorts of abuse, as they bear rather hard on the private railroad companies.

My husband has now only the usual routine of the office business, which is quite enough to wear anybody down; but he says that he shall try and take it more quietly. He still goes into Dublin at a quarter before nine in the morning; he gets to town by the railroad. Now and then I hope we may be able to get a walk on the pier together in the evening. By your letter I imagine you take rather too serious a view of my husband's illness. A little excitement does him a great deal of good; and when by some chance he gets a few minutes' romping with that little wild gipsy, Mary, he is always better. When Lord Morpeth comes we talk of taking a fortnight or three weeks' excursion to Killarney, but of course my husband cannot stir till he comes. What seems to tire and harass him most is the constant wearying petty details of office business. It is certainly the most laborious situation under Government. . . . . He is decidedly better. His digestion seems stronger, and he sleeps better. Whenever he comes home, I take care to prevent as much as possible any allusion to public matters, and I try to interest him in any other subject. . . . . With kind love from all to all, believe me, ever yours affectionately,

"MARIA DRUMMOND."

The letters written by Mrs Drummond give interesting glimpses into the home circle, and vividly represent Mr Drummond's surroundings when free from business cares. It must be enough, however, for the reader to know what is said regarding these by one who, during Drummond's whole residence as Under Secretary in Ireland, associated with him on terms of affectionate intimacy. "His domestic life," says Mr Brady, "was pure, loving, unselfish, and happy; devoid of any disturbing incidents, and only broken by his unceasing devotion to public duties."

The session of Parliament having ended, Lord Morpeth came over, and Mr and Mrs Drummond set out for the Continent. Their route is minutely described in a series of letters from Mr Drummond to his mother. On the 3d September they were at Brussels, where Mr Drummond was for some time laid up by an illness. On the 27th September they had reached Baden Baden. He was better, and they proposed to pass through the Tyrol and on to Munich. From Munich he wrote on the 18th October. By this time he had, according to himself, quite recovered from the illness that had detained him at Brussels. They had enjoyed the Tyrol, and had been to Salzburg. They were now homeward-bound, "both well and strong," and expecting to be in London by the 2d November. Their route homewards lay by Augsburg, Nuremberg, Frankfort, and Mayence; thence by the Rhine to Cologne; whence to Liege, Brussels, and by Ostend to London. At Munich he was gratified by a note from Lord Morpeth, informing him that the Railway Report was daily rising in public estimation. He also received at this place a letter from his mother, urging him to give up the Under Secretaryship. As regards this

he wrote saying that he considered it to be his duty to hold to the post, but that, of course, his health must be considered and not sacrificed. "If on my return," he said, "I feel the work oppressive, I shall give the office up. But I do not anticipate anything like the labour I have had. Things are now better organised. They are becoming daily more so, and, thank God, the Railroad Report is done."

November 1838 found him again in Dublin and in harness. His short tour had not done him so much good as he imagined. "He was somewhat restored," says General Larcom; "but those who had known him long, and saw him now, began to mark the ashy cheek and sunken eye. When he undertook the Railway Commission he was in physical strength unequal to the task, and he never recovered that fatal addition to his labours. He returned, however, to business with his usual avidity."

The Railroad Report was indeed completed, but its publication was only the introduction to a new series of exertions in behalf of the railway scheme. He worked hard to establish a public opinion in its favour. He corresponded with, and encouraged, writers even in provincial papers who wrote favourably of it; and with his own or friends' pens defended it in every quarter, in which he could usefully do so, against the attacks of its interested enemies. His official work, again, proved to be heavier than he had expected. The Government railway measure had to be prepared. In a few weeks came the murder of Lord Norbury, followed by a storm of excitement. Next came the exhausting labour of preparation for his examination before the Roden Committee, and the excitement and fatigue of that long examination itself. The year 1839, instead of being a

year of comparative rest, was as heavy a year of work as any of its predecessors.

On 10th February 1839 he wrote to his mother, anticipating the changes likely to follow Lord Normanby's retirement from Ireland and succession to the Colonial Office. "What will be our fate here," he says, "I know not. Lord Morpeth will be in the cabinet, and perhaps a showman will be thought the best for Ireland, if such can be found." On 18th February he wrote again. He was now oppressed with work, and suffering from a bad cold. The nature of the oppressive work is disclosed in a letter dated the 27th February:—"I have had a pressing paper to prepare for Lord Morpeth"—probably materials for the speech with which his lordship introduced the Government Irish Railroad measure in the House of Commons on the 1st of March. That Drummond occasionally did the work of priming the Irish ministers, or their chief supporters in Parliament, over and above his other official work, is shown by a letter to him from Pigot, then in Parliament as Solicitor-General for Ireland, dated Friday, 28th April 1839. Pigot tells him of the reception he met in delivering a speech in the preparation of which Drummond had assisted, or which was an expression of views with which Drummond had indoctrinated him.* We have evidence of it also in a letter from Drummond to his mother, dated 10th March 1839, apropos of the debate on Shaw's motion:—

"The debate on Shaw's motion will show you the cause of my having been so much occupied of late; to say nothing of the railways, a still more important matter. Lord Morpeth made an admirable speech on Shaw's motion, and you will

* A note from Lord Normanby, addressed to Mr Drummond, declared Pigot's speech to have been a complete success.

perceive that he was well supplied with ammunition. It takes no small time, and gives no small trouble, however, to collect it. Lord Roden has just given notice of a similar attack in the Lords, and now a fresh demand comes from Lord Normanby. These men, Roden and Shaw, &c., keep us busy enough; but I am in hopes we shall sail more quietly after these squalls.

"The Bill founded on the Railway Report has passed its first stage by a large majority; but since then there has been a great cabal formed against it, and we dread a defeat on bringing up the Report."

Lord Roden having succeeded in procuring the appointment of a select committee to inquire into the conduct of the Irish Administration, in regard to crime in Ireland, between 1835 and 1839, Lord John Russell gave notice, in the House of Commons, of his resolutions approving of the Irish Administration. Apropos of this, Drummond, on the 24th March 1839, wrote to his mother:—

"The debate in the Lords, and the subsequent notice by Lord John Russell, will show you that the existence of the Irish Government is in peril, and that it is to be fairly and fully tried in the House of Commons immediately after the Easter holidays. I am glad of this. It will either confirm our power, or put an end to an Administration which cannot be conducted usefully, subject to the control of the Lords. This event will excite the deepest interest throughout Ireland; and great would be the excitement if the result should be a Tory Lord Lieutenant instead of Lord Fortescue."

He wrote to her again on 31st March 1839. A great meeting was being got up in Dublin to support the Government. He expected it to be held on the 8th of April. "I think," he says, "we shall be successful; but it will be a hard-fought battle. Lord Ebrington is expected to arrive in a day or two. There will be an amazing sensation caused here if the Tories should suc-

ceed, *but I don't think they will.*" On 14th April he reported that the meeting had been held, and was a great success :—

"Our meeting has gone off admirably, and has produced a strong sensation. It will have its effect on the other side. There has not been such a reunion of all classes of reformers—nobles, gentry, merchants, and shop-keepers—here for years. The Orangemen attempted some little interruption, but they were crushed, and their presence gave vivacity to the meeting, and energy to the speakers. . . . . We now wait the result of Monday's discussion, having done our part well. It was no small matter getting the Duke of Leinster to preside. He had declared that he would never meet O'Connell at a public meeting for political purposes. I had some share in getting all this managed. I got Lord Charlemont to go down and dine with the Duke, and then propose to him to take the chair. This succeeded. The next consideration was where to get a room large enough, and I proposed the theatre. The objection was, not having sufficient daylight, but this was met by proposing to have the usual gas-light. . . . . My new master [Lord Ebrington] goes on very well. He is an excellent man, very different in manner from Lord Normanby, of a much graver cast, and the ladies will miss the gaiety of the Normanby Court; but the course of policy will be as firmly and inflexibly followed as before."

A similar meeting, attempted to be got up in Edinburgh, was a failure—the Radicals and Dissenters ousting the local Whig leaders from the platform, and converting the intended demonstration in favour of the Government into a demonstration against the Whigs, and all unprincipled favourers of the papacy!

The Government had a temporary triumph; it was quickly succeeded by a virtual defeat on their Jamaican policy, which again was followed by their resignation. Sir Robert Peel, at the call of the Queen, proceeded

to form an administration, but declined to go on with it because Her Majesty insisted on retaining in attendance upon her the sister of Lord Morpeth and the wife of Lord Normanby—the men whose policy in Ireland was the subject, of all others, most keenly contested at the time between parties in Parliament. On Peel's declinature the Whigs resumed office—a course of which Drummond much disapproved. On 5th May 1839 he wrote to his mother, stating that for some days back he had been preparing to quit Ireland, but that the state of things had again changed, and he was to remain. "I do not at all like the grounds on which the Government has been resumed," he says; "I think Peel is right, and that the struggle will end in our discomfiture and in the humiliation of the Queen." He was right so far, that the event was for a time prejudicial to the interests of the Liberal party.*

Drummond's examination before the Roden Committee commenced on the 14th of June 1839, and ended

* Lord Brougham made the conduct of ministers on this occasion one of the chief grounds of attacking them when they were defeated in the Lords, 6th August 1839. He said, "I will not deny I desired their fall when I saw them—with astonishment saw them—stand on the most Tory ground—ground ever most bitterly assailed by them in their better days—for the Tories always had the decency to cover over the nakedness of their courtly propensities with some rag of public principle, and spoke of danger to the church and the other institutions, when they really meant risk of the king being thwarted and their own power subverted. But these Whig ministers under my noble friend, stripping off all decent covering, without one rag of public principle of any kind, stand before the country stark naked, as mere courtiers—mere seekers of royal favour, and do not utter a single whisper to show that they have a single principle in their contemplation, save the securing a continuance of their places by making themselves subservient creatures of the palace." This indignation would have been virtuous, if it had not been spiteful.

on the 27th. The nature and objects of that examination have already, in part, been exhibited, and, in part, briefly referred to. The inquiry involved an investigation into the whole government of Ireland during Drummond's previous official life in the country; and in the Report of the Committee, which occupies 1584 pages folio, will be found the best record of his acts. The origin of the inquiry I formerly pointed out. There were charges against the Government of contravention of the Police Act of 1836, raised in connection partly with the trials of certain constables for offences, but chiefly with the resignation of the Inspector-General of the force—Colonel Shaw Kennedy.* The Government were charged with having abandoned or impaired the right of the Crown in regard to the challenging of jurors; with having produced, by their arrangements, an inferior class of jurors; and with failure in various other ways in the prosecution and punishment of offenders. They were farther charged with having shown partiality to the Roman Catholic people, with undue severity towards the Orangemen, and with neglect of duty in regard to the suppression of Ribandism and other illegal societies. They were also specially charged with an improper exhibition of clemency to convicts. The issue of the inquiry has already been stated. A draft report, in very adverse terms, was prepared by or for Lord Brougham. This was met by a counter draft of a report, referring to the various passages in the evidence which supported conclusions favourable to the Government. The counter draft was supported by the late Lord Hatherton. After a good deal of discussion, the committee resolved to report the evidence, and do no more. The result was, that the adverse opinion

* Referred to *ante*, p. 277.

which, upon Lord Brougham's motion, was expressed in the House of Lords, was in effect confined to one of the charges only—the liberation by Lord Normanby of some prisoners from jail, almost at the commencement of his Administration.

A few days after the close of his examination, Drummond paid a visit to Lord Spencer. They had met in London; Drummond afterwards visited him at Althorp before returning to Dublin. This was the visit to which he was pressed by his lordship, in words already quoted, "This gives me a chance of seeing you again once more before I die."* Their conversation seems to have turned chiefly on the state of Drummond's health, his future career, and the propriety of his still remaining for a time in Ireland. There are two written accounts of the conversation—one, in a letter from Lord Spencer to Mr Drummond's mother, written on April 26, 1840; and the other, written July 12, 1839, by Drummond himself to his sister, from Liverpool on his way home. An extract from his lordship's letter will be given further on; a passage from Drummond's is subjoined. His sister had written to him urging him to enter Parliament, and laying down some rules to which she recommended him to adhere with a view to parliamentary success.

"So far on my return. I have been in such a constant turmoil that I have not had time till now to thank you for your excellent note; it contains most judicious advice, and, be assured, that if ever the circumstances arise, I shall follow the plan you suggest. I have seen Lord Spencer, and his advice was given almost in your words. My examination before the Roden Committee has been, I believe, publicly useful and privately beneficial. Lord Spencer, who never

* *Ante*, p. 175.

flatters, though he may sometimes err, said, 'Your reputation has been immensely raised by your conduct in Ireland; it was well before that, but it stands much higher now. I do not think you should leave, because you cannot fill any other at present in which you could do so much good to your fellow-creatures; but, in the event of a break up, you must get into Parliament; and if you do, as you soon must, and as I think you will, there is no situation which you may not look to'. But then he added, in his usual frank manner, "I believe I am right; but, at the same time, my partiality may have warped my opinion.' I have doubts of my success as a speaker; but, if the time should come when I must make the experiment, I shall follow the plan which you and Lord Spencer prescribe."

The circumstances here contemplated were, however, never to arise. His resolution to remain to the last at the post where he conceived he could do most good to his fellow-creatures, was to be fatal to his prospects of a further career. How he would have succeeded in Parliament has often since been a subject of speculation among the friends who survived him. It was understood that the department for which he was qualifying himself, and to which he was looking forward, was that of finance—in short, that his ambition was to become some day Chancellor of the Exchequer. Lord Hatherton's opinion, agreeing with that of Earl Spencer, is recorded, and was frequently expressed to Mr Drummond's friends in the Administration, "that he was fitted for any department," and that nothing could have prevented him, had he lived, from rising to the highest political eminence. A more prosaic view is Dr Madden's:—

"He had a mind of sufficient reach to grasp a large system of policy, and he knew how to grapple with the difficulties of execution. Indefatigable in labour, observant in spirit, and

apprehensive of knowledge, he could not have failed to reach one of the foremost stations in political life. His probable success in the House of Commons was oftentimes among his friends a subject of discussion. Some said it would have been a total failure, for he had not cultivated parliamentary talents; others said that the energy of his mind and character would have enabled him to triumph in debate; but such adverse opinions were perhaps equally erroneous. Had Drummond lived to enter the House of Commons, he would at first have failed, and even signally so. He would have found it very difficult to suit himself to the House, and to adapt his mind to that particular method of discussion which the House prefers; he would not have been able for a long time to acquire the skill by which a man conveys his knowledge of an intricate question to an assembly so mixed in its character as the House of Commons. But practice and time would have made him an efficient every-day debater; he would have been unsurpassed in the labours of committees; and, in the course of a few years, he would have amassed an amount of political knowledge that would have enabled him at any time to command the ear of the House."

The rest of this confident verdict is, that Drummond's integrity, personal disinterestedness, manly and loveable qualities, and constant efforts at self-improvement, would have made him most popular amongst the members on both sides of the House. But what might have followed from this popularity, and from his gaining the ear of the House, is not conjectured. Quite as well so. The speculations are of value only as showing the estimation in which the man was held by some of those who knew him.

CHAPTER XX.

1839-1840; MR DRUMMOND'S HEALTH; HIS LAST ILLNESS AND DEATH; EXPRESSIONS OF OPINION AND FEELING EVOKED BY HIS DEATH; HIS CHARACTER.

In the winter of 1839 Mr Drummond's health again became visibly impaired. "Illness," says Larcom, "succeeded illness, each inconsiderable, but together showing that while the mind increased in grasp and power, and from every exercise and every conquest sprung to yet loftier efforts, mortality prevailed and strength declined."

There is a budget before me of the letters which he wrote to his "dearest dear mother" in these few last months of his life. They are mostly occupied by statements intended to allay her solicitude, and calm her fears. His own courage seems never to have failed; his own fears never to have been fairly aroused. He was suffering in these months from a throat affection, which he affected to take lightly, probably with the view of saving his mother distress. "I do assure you, my dearest dear mother," he wrote on February 2, 1840, "that you are distressing yourself very unnecessarily about me. I have carefully told you the whole extent of throat affection, which is really very trifling. It is so much diminished that I am going to the office to-morrow; but if it be not gone entirely by the end of the week, I shall probably run over to Cheltenham for

seven or eight days. I have no cough, and really very little discomfort."

The visit to Cheltenham had to be paid. On the 16th February he wrote:—

"MY DEAREST DEAR MOTHER,—I have just time to say that we are on the point of starting to sail this evening by the half-past eleven o'clock packet for Liverpool; the night calm and pleasant. All well here, pets and all. We go by railway to Birmingham, and thence to Cheltenham, where we shall remain. Maria sends her kindest love to you. Adieu, my dearest dear mother, and with kindest love to my ever dear Eliza, and affectionate remembrances to John, believe me, ever most affectionately yours,

"T. DRUMMOND."

There were subsequent letters, no doubt, but they have not been preserved. So far as appears, this was a last farewell.

He returned to Dublin by the end of February, and set to work again. On Friday, the 10th of April, he entertained a party of friends at dinner. He rode to the Castle as usual on Saturday morning, and spent nearly nine hours in his office. On Sunday morning he became seriously unwell. He became worse on Monday and Tuesday, and on Wednesday afternoon, April 15, 1840, he died. All that medical skill could do to avert death was done. Dr Johnstone was in constant attendance, while Sir Henry Marsh sat up all of one of the nights with him; and a young physician, a nephew of Sir Henry's, never left him night or day. The disease was considered to be internal erysipelas.

The incidents of his last illness are singular and affecting. I give them as they have been supplied to me.

"On the night before he died he asked to see his

children. He was dissuaded from this. He then begged Dr Johnstone to open a drawer, which he pointed out, where there were three small Bibles, each with a history attached to it. 'Give these,' he said, 'to my children, with their papa's blessing. It is the best legacy I can leave them.'"

"A few hours before all was over, Dr Johnstone told him, in answer to his inquiries, that the closing scene was near. He laid his hand on his heart, and said, 'Doctor, all is peace.'

"Referring to this inward peace, he spoke of his mother, saying, 'Tell my dear mother that, on my deathbed, I remembered the instructions I had received from her in childhood.'

"In parting with his wife, he said to her, 'Dearest, beloved Maria, you have been an angel wife to me. Your admonitions have been blessed to me also.' They parted before the last. He was most anxious that she should be spared the pain of witnessing his last moments, and begged the doctor to take care that she should be removed from the room.

"When he was dying, Dr Johnstone, his friend and physician, asked him where he wished to be laid, 'In Ireland or in Scotland?' 'In Ireland, the land of my adoption,' was the immediate answer. 'I have loved her well and served her faithfully, and lost my life in her service.'"

"Thus he died," says Larcom, "in the plenitude of mental power and the maturity of knowledge, beloved in private and esteemed in public life, undimmed by failure and unclouded by reverse."

In the three kingdoms his death was announced as a public loss. Testimony was everywhere borne to his

unwearied industry, high talent, and spotless character. It was the general verdict that he was as good a man in private life, and as efficient a public officer, as ever the world produced. In Ireland his death was bewailed as a national calamity. The simplicity of his devotion to her, before known to many, and now believed by all on the evidence of his dying words, combined Irishmen of all classes and parties in a common lamentation.

Among his friends, some thought first of his beloved and bereaved widow; others of the beloved and devoted mother, the pride of whose heart had perished.

Each of his old, and, to the last, cherished comrades of Woolwich and the Survey, hastened to offer to his mother the duty of a son, claiming to have loved him as a brother.

Newer friends hastened also to console her by demonstrations of their esteem and affection.

"How severe your affliction must be," wrote Lord Ebrington, "I can but too well understand, after the opportunities which I derived from our daily and confidential intercourse of observing those noble and endearing qualities of heart and of mind which made me feel for him quite the affection of a brother."*

"If ever a man died for his country," wrote Lord Spencer, "he did so, and that country ought not, and I believe will not, be sparing in its expressions of gratitude to his memory. . . . When I saw him last I deceived myself, he looked so well and appeared so young that I hoped the illness which he had suffered from before had passed away. But I still knew that the labour he was going through was beyond human endurance, and I urged upon him to take the first oppor-

* May 4, 1840.

tunity he could with honour to retire from his position in Ireland, to come into Parliament, and to apply himself to what is considered the higher, though it certainly is not a more useful or honourable line of political life. I did so for the reasons I have given, and also because I was confident that in this, as in everything he had undertaken, his abilities and high character would soon place him in the most eminent position. He promised me he would do so; but I was obliged to agree with him, that unless some change took place in the Irish Government, he could not with honour to himself resign his office. My loss is great indeed, in the loss of such a friend; the loss of the country is great in the loss of such a public man; but yours, my dear madam, is so much beyond all, that I can find no words to express it. It is not the loss of a mother merely, it is not even the loss of a mother in losing such a son; but my intimacy with him led me to know the peculiar attachment between you and him. I know he was to you everything. Had he fallen in his military profession, you would have had the consolation of feeling, in common with other mothers who have had to lament their sons who have died fighting for their country, that he died doing his duty; but you would not have had the consolation of knowing that he had left behind him works which will be beneficial to his fellow-creatures for ages, perhaps, to come. He has died for his country, and it is his extra-official labours which have been the cause of his death; and you must reflect with satisfaction that, whenever Ireland does attain to the state of wealth and prosperity she will ultimately come to, it will be owing to Drummond's Report on the Railway System; that if disturbance is checked in that country, it will be owing to the able arrangements he has made with respect to the con-

stabulary force. It was under the extra labour imposed on him by these two great works that his health broke down. He died, therefore, for his country, and he died doing her as great good as any one man ever effected."*

Mr Drummond was buried at the cemetery of Mount Jerome, in Harold's Cross, on Tuesday morning, 21st April 1840. It was a private, and yet it partook of the nature of a public funeral. It was attended by the Lord Lieutenant and the Chief Secretary, the Duke of Leinster, and the leading members of the Irish nobility, the Archbishop of Dublin, the City Members, the Mayor, and other civic dignitaries, many of the judges and leaders of the bar,—by almost every person of importance in the state or city. The pall was borne by the Lord Chancellor, the Master of the Rolls, Judges Perrin and Ball, Baron Richards, and Major-General Sir John F. Burgoyne. For the rest, the whole populace joined in the mournful procession. "He had died for Ireland," says Larcom; "the scientific soldier had become the philosophic statesman, and his funeral beseemed the latter. There was no military display, the pomp of martial woe was merged in the demonstration of popular regret. Appalled by the sudden blow, a general grief prevailed, and the city poured its thousands through the streets in one prolonged procession,—the private friend, the public colleague, and the high and noble of the land." The honours paid to his remains proved the price set upon his services, not by a sect or a party, but by the nation.

* Extract from letter, Lord Spencer to Mr Drummond's mother, dated April 26, 1840. The allusion to the Railway Report shows that Drummond's hopes of a permanent improvement of Irish society from the railway project were shared by others.

In 1843 a statue by Hogan was erected to his memory by public subscription, in the great hall of the building called the Royal Exchange, now the City Hall of the Dublin municipal corporation. Miss Martineau, who had not met Drummond after 1835, thus speaks of it:—"*I* went to America and *he* went to Ireland, and we met no more. When I went to Ireland in 1852, one of my first objects in Dublin was to see the statue of my poor old friend in the Royal Exchange. It was a far more pathetic spectacle than I had imagined. It was the same face,—but I should hardly have known it without looking for it;—so worn, almost haggard, in comparison with what it had been! It justified his closing words,—'I die for Ireland.'"*

In 1865 his sister founded in the University of Edinburgh a Scholarship in Mathematics and Natural Philosophy, endowed with a sum of L.2500, to connect her brother's name for ever in his own place of education with studies in which he obtained, apart from his political career, substantial distinction among scientific men.

What manner of man Drummond was may be judged from the feelings with which he inspired his friends. We have seen what some of them felt; there are others still living of whom it would not be too much to say that they actually worship his memory. They loved him as a man; they admired him for his talents; and they venerated him for his self-devotion. One to whom it should naturally have fallen to record the chief events in his life thus states his inability even now to write about him:—"I hardly feel myself an impartial

* Letter to Mr Robert Cox, dated June 17, 1865.

witness. My feelings towards him were those of the warmest attachment and devotion. He was the best friend I ever knew. What I should or could write would appear extravagant, and yet fall short of the truth." "After the lapse of seven and twenty years," writes another of his coadjutors, "the wound which I received by the death of Drummond—sudden and unexpected as the announcement of it was when I received it—is as fresh at this hour as if these years had not rolled over me. I knew him well; I loved him as a brother would love him; and I revered him as one of the best and truest as well as of the ablest of men."

In closing this narrative, I am the more sensible of its imperfections when I regard it in the light of sentiments thus expressed. The facts of Drummond's life, however, are before the reader as fully and fairly as I could place them. All may not receive from them the same impressions: from me they have commanded for him profound respect and genuine admiration. He was a Scotsman of the best type, and his country may well be proud of him. In the earlier portion of his life were exhibited chiefly those practical qualities and talents which, more frequently than enthusiasm, are the distinctions of our countrymen; their influence in helping him on in the world is as clear as to many it may be uninteresting. It is when he ceases to be a mere man of ability,—it is when he shows in himself wells of righteous indignation at evils unredressed, and the capacity of self-immolation, if necessary, to remedy them,—it is when he becomes a missionary and apostolic person,—that the real interest in his life begins.

What he could have done—in science or in politics—it was fated should never be fully exhibited—

> "Had he but lived—
> Yet very vain and fruitless is the wish!
> Death holds up in his hand the lamp by which
> We note the prostrate strength, and guess what all
> At strain could reach."

On the threshold of a scientific career he was diverted to political pursuits; on the eve of entering the more prominent walks of public life he was cut off. Yet, as his name will always be remembered in connection with geodetical science at least, so will it ever be respected in connection with the Government of Ireland,—I would say, indeed, with the art of Government. There will yet, for a time, be various opinions of his actings in Ireland and of the Administration in which he served. But there must even now be few who will deny that he and his coadjutors in the Melbourne Ministry, as well as in the Irish Government, were honestly engaged, between 1835 and 1840, in a serious effort to effect a permanent amelioration in the condition of the Irish—an effort which, unhappily, has not been followed up. When an impartial public verdict shall have become possible, through the settlement of questions which still sustain the rancour of political and religious hostility, it will be admitted that there have been few finer exhibitions of the art of ruling applied to most difficult circumstances, in most critical times, than the Administration of Ireland afforded in those years. And the more minutely the history of the time is investigated, the more clearly, I believe, will it appear that Drummond was the master-mind in that Administration.

"There is no survivor of that Administration," said Miss Martineau, now many years since in one of the most eloquent passages in her "History of the Peace,"—"There is no survivor of that Administration who will not eagerly assent to the avowal that one member, Mr Drummond, was the mind and soul of it. He was a man of great external calmness, of eminent prudence in the ordinary affairs of life, and, till of late years, apparently devoted altogether to scientific pursuits. His acquaintances were wont to rally him for his Scotch prudence and caution, and to describe the pleasures and pains of enthusiasm to him, as things that he could not possibly know anything about. It was his function in Ireland which revealed him to his friends, if not to himself. His subdued enthusiasm now manifested itself in a moral force, as lofty and sustained as it was powerful. The cool man of science came out the philanthropist, the philosopher, the statesman, the virtual preacher—carrying the loftiest spirit of devotedness into each function. He put wisdom into the councils of the Irish Government, and moderation into its demeanour. He put enthusiasm into the justice which he gave impartially to the Irish people; and he called for justice in the enthusiasms which the observant people paid back to the Government. It was he who repressed crime throughout the nation, and rebuked its passions, and stilled its turbulence, and encouraged its hopes, and stimulated its industry, and soothed its sorrows. His sobriety of judgment and calmness of manner never gave way; but a fervour, like that of renewed youth, latterly pervaded his whole mind, animated all his faculties, and deepened his habitual composure, while he was consciously meeting the martyr's doom. He lived too fast, knowingly and willingly, during these few

years which he believed to be so critical for Ireland. Under his work, his responsibilities, his thronging ideas, his working emotions, his frame could not hold out long, and he was prostrated at once by an attack of illness in the spring of 1840. 'I am dying for Ireland,' he said, just at the last. He died for Ireland; and, in contemplation of his death, how do other deaths which bear more of the external marks of martyrdom for Ireland shrink, by comparison, in our estimate! Here was no passion—no insulting speech—no underhand or defiant action—no collision of duties—no forfeiture of good faith—no implication of the helpless in danger—no disturbance of society—no imperilling of any life but his own. No man who courted the bullet or the gibbet ever dared more. No man who organised rebellion in consultations by day and drillings at night ever wrought harder. No man who cast his all into the revolutionary balance was ever more disinterested and devoted. He, a soldier of a sensitive spirit, brought upon himself unmeasured insult, which would elsewhere have been intolerable; but for Ireland's sake he bore it all. He went through endless toils, which nobody knew of who could give him any return of honour. He felt himself sinking before he had attained the rewards which might once have been alluring to him—before he had attained wealth, or rank, or a post in the world's eye, or the fame of statesmanship:- but he toiled on, too busy on Ireland's behalf to have a regret to spare for such things as these. If there are any who can reconcile themselves to such an issue, let them remember how noble a way remains to do him honour. Let them name his name when Ireland wants his example. When boasts of martyrdom abound, and blustering patriots would rouse the ignorant and suffering to rash enterprises, and men who

will not work for Ireland talk of fighting for her, and those who cannot deny their own vanity, or indolence, or worldly care, claim the glory of patriotic agitation, let the name of Thomas Drummond be quietly spoken, and human nature has lost its rectitude and its sensibility, if the arrogance be not shamed, and the vaunt silenced."

APPENDIX.

No. I.

LETTER FROM SIR JOHN F. W. HERSCHEL, BART., TO THE LATE MRS DRUMMOND, SHANDWICK PLACE, EDINBURGH.

COLLINGWOOD, HAWKHURST, *May* 12, 1840.

MY DEAR MADAM,—The wish expressed in your letter to my wife, under the mournful circumstances of the case, has to me the force of a command, to which, on every account, my obedience can only be limited to my power.

Unfortunately I am so circumstanced, having just got into my present residence—my books, papers, memoranda, and every document in a state of utter disorder, and for the most part not unpacked—that it is imposible for me to make any precise statements involving dates, &c., or to go into the subject, however interesting to my feelings, further than my individual recollection of what I have myself witnessed of your lamented son's scientific career will carry me. But that shall not prevent me so far as my ability goes; for the strong impression left on my mind of his amiable, yet firm and manly character, his distinguished talent and extraordinary activity, will not allow me to hesitate an instant in responding to your call.

He was indeed beloved by every one who came in contact with him, for the strength and correctness of his views were so tempered by the gentleness of his manner, and the modesty of his pretensions, that I never knew but one opinion formed of him; and when he quitted the walks of science for the high and efficient line of public life which called forth the full exertion of his great powers, the impression was general that his suc-

cess as a man of science, had he desired it, must have been of a very distinguished kind. A strongly characteristic feature of Mr Drummond's scientific undertakings and improvements was, their eminently practical nature, and the directness with which they attained the distinct object in view, by means highly ingenious, and quite out of the common line of contrivance, yet meeting, fully and precisely, every exigency of the case.

The scene of his scientific labours was the Irish Survey, one of the greatest national works of this description which was ever undertaken. In the very outset of this undertaking great difficulties were experienced, owing to the magnitude of the triangles to be formed, and the dreadful weather encountered, which for weeks and months together rendered the stations invisible from each other.

On occasion of a similar difficulty, but on a smaller scale, during the remeasurement of some of General Roy's triangles, the heliostat of Gauss had been used with effect, but the apparatus devised by its inventor not being obtainable for directing it properly, the resources of Mr Drummond readily furnished, by a simple and very ingenious contrivance, the means of doing so.*

But the difficulties of the Irish operations were of a higher kind, and it became further necessary to provide some still more powerful means of producing a light which should penetrate 60, 70, or 80 miles of mist and drizzle, preserving a concentration and sharpness sufficient for a point of astronomical observation. On this occasion was produced the celebrated "Drummond Light," in which a small ball of quicklime, intensely heated by the flames of spirit lamps, urged by jets of oxygen gas concentrated on it, pours forth a flood of splendour like the meridian sun, insupportable to the eye, and when enclosed in its proper reflector, casting broad shadows at a distance of many miles.

The fact that lime intensely heated gives out a brilliant light, was not new. Not to speak of a strange plan for producing intense heat by addition of much lime to little fuel, which

* See pp. 71, 72, *ante*.

had been propounded in a plan whose failure might have been certainly predicted, and which argued the observation of a vivid apparent ignition originating in the heated surface of the lime, Sir David Brewster had noticed that small points of wood dipped in a solution of lime, and arranged around a candle, so as to touch the outer invisible flame in which the heat resides, gave out a copious and very white light, and proposed *this* as a mean of increasing the power of light from candles.*

The merit of Mr Drummond in this invention is of a different kind, and consists in the ready seizure of fact precisely bearing on his own case, and its perfectly effective application to a particular object in view.

It is now with a melancholy pleasure that I recall the impression produced by the view of this magnificent spectacle, as exhibited (previous to its trial in the field) in the vast Armoury in the Tower, an apartment 300 feet long, placed at his disposal for the occasion.

The common Argand burner and parabolic reflector of a British lighthouse was first exhibited (the room being darkened), and with considerable effect. Fresnel's superb lamp was next disclosed, at whose superior effect the other seemed to dwindle, and showed in a manner quite subordinate. But when the gas began to play, and, the lime being now brought to its full ignition, the screen was suddenly removed, a glare shown forth overpowering, and as it were annihilating, both its predecessors, which appeared by its side—the one as a feeble gleam which it required attention to see, the other like a mere plate of heated metal. A shout of triumph and admiration burst from all present. Prisms to analyse the rays, photometric contrivances to measure their intensity, screens to cast shadows, were speedily in requisition, and the scene was one of extraordinary excitement.

The new light succeeded perfectly for the object of its invention. The azimuth of Slieve Snaght (one station) as seen from the Divis hill, at a distance of nearly 70 miles, was obtained by

* See Appendix II.

its help under circumstances of uncommon difficulty; and, if I mistake not, the coasts of Ireland and Scotland were connected by an immense triangle, the one apex resting on Knocklach, the other on Ben-Lomond, 95 miles miles distant, by the same powerful means.

Mr Drummond proposed this light as a means of illuminating lighthouses, and experiments were made to ascertain its applicability to that purpose.

So far as the illumination goes, the success was complete, the effect surpassing everything that had been before attempted. An account of these experiments will be found in the Transactions of the Royal Society.

The exigencies of the Irish Survey were continually calling into full activity the energies of all employed in it. I am unable decidedly to say, and will not therefore incur the hazard of doing injustice to the talented and estimable officer at the head of that operation, by deciding whether the beautiful and simple idea, by which was performed the compensation for temperature of the rods employed in measuring the base in the plains near Londonderry, originated with himself or with Mr Drummond. It proved as successful in practice as it is perfect in theory, and in its effects went to abolish altogether one of the most precarious and annoying corrections in that most delicate and difficult geodetical operation.

To whichever be due the credit of originating this invention, the details of the contrivance and execution of the project devolved on the latter, who, in accordance with what seems to have been a constant principle in his conduct, to leave nothing undone that personal exertion and assiduity could accomplish to ensure success, not content with entrusting, as many would have done, the adjustment of the compensation to an instrument maker, himself executed, in the midst of furnaces, ovens, and freezing mixtures, all the trials, manipulations, and measurements, necessary to ensure success.

An anecdote may be mentioned here which sets in a strong light this leading principle of hearty devotion to his object and its duties, not only to the exclusion of personal ease, but to the utter abnegation of all that egotistical feeling which

induces so many to turn aside from the suggestions of another with indifference, if not with aversion. While engaged in these operations, the conversation between himself and a scientific friend happened to turn on the discovery of Mitscherlich, who had shown that in certain crystallised substances heat occasions expansion in some directions, and contraction in others, necessarily implying invariability in some intermediate directions. It was suggested, as a bare possibility, that such a condition might be satisfied by cutting mica in some certain direction to be ascertained by trial, in which case an inexpansive or naturally compensated measure would be obtained. The hint held out but little promise. Nevertheless, some time afterwards, the writer of these lines, happening to visit him in his apartments at the Tower, found him surrounded by stripes of mica, and busied in working out the suggestion. The result, however, proved abortive in everything but in the illustration of character it afforded.

In the active operation of the Irish Survey he maintained on all occasions the character of a consummate observer, and most able and active coadjutor. In remote and rural districts, surrounded by a peasantry often prejudiced, sometimes distrustful, generally superstitious, much care and all the arts of conciliation were requisite to secure their aid, and even in some cases to avert their ill offices. It may easily be imagined in such a service how important were the advantages of a temper eminently conciliatory, and which secured on all occasions the willing and joyful aid of every one connected with or subordinate to him. Every one, indeed, was not only willing but eager to work in conjunction with him, and felt it as a privilege and a pleasure to do so.

I am not enough acquainted with the railway proceedings to give any account of his labours on that subject. Indeed, in what I have above said, I have confined myself to such points as I have a clear recollection and personal knowledge of; but if, from what I have said, any extract may appear worthy of being put forward in any way, you are at liberty to make any use of it you may think proper. And in conclusion, I beg you will accept, my dear Madam, the heartfelt condolence of one

who sincerely esteemed and admired him you have lost, and who would gladly have cultivated his more intimate friendship had circumstances thrown us more together.—I remain, dear Madam, your very obedient servant,

J. F. W. HERSCHEL.

No. II.

The proposal of Sir David Brewster, referred to in Sir John Herschel's letter, is the subject of a short paper by Sir David, in the "Edinburgh Philosophical Journal" for 1820, which merits quotation as illustrating the early stages of discovery in connection with the Drummond Light:—

"About the middle of last summer, Mr Cameron of Glasgow (the inventor of the ingenious method of making crucibles, described in our last number), brought me some pieces of wood that had been steeped in oxymuriate of lime, the common bleaching powder of Mr Tennant, and mentioned to me that he had observed a singular luminous property in the white substance which remained after burning the wood. In order to observe this appearance, the end of the piece of wood is held in the flame of a candle till it is completely burnt. A sort of white substance is left at the end of the wood, and when this substance is held in the outer part of the flame of the candle, it exhibits a brilliant dazzling light, not much, if at all, inferior to that which arises from the deflagration of charcoal by the action of galvanism. When bits of woods of different kinds were steeped in the oxymuriate of lime, they gave the same results, only the harder woods seemed to produce a more satisfactory effect than the softer kinds.

"By submitting the whole substance to the action of the blowpipe, I found that the intensity of the light was greatly increased, but the white substance was generally driven away by the blast.

"Upon showing this experiment to Mr Sivright of Meggetland, he conjectured that the white residue of the burnt wood consisted of particles of lime in a minute state of division; and

we found upon trial that it was soluble in nitric acid. Dr Fyfe, to whom I gave a portion of the ashes, found them to be pure lime, and also ascertained that wood acquired the same property by being steeped in solutions of the salts of that earth, or in lime-water. I obtained a similar result by steeping the wood in a solution of sulphate of magnesia; but no effect was produced when it was steeped in a solution of hydrate of barytes. The calcareous residue was highly phosphorescent, when thrown upon a hot iron, but the magnesian residue exhibited no symptoms of phosphorescence.

"The sight of these experiments naturally suggests the idea, which occurred also to Mr Cameron, that such a brilliant light, capable of being developed by the heat of the flame of a candle, might have some useful application. In order to obtain some information on this point, I prepared three or four pieces of wood terminated with the white masses of absorbed lime, and placed these masses so as to remain near the circumference of the flame of a candle. In this situation they yielded the brilliant light already described, and lasted, without any apparent diminution, for more than two hours. I next prepared a very thin slice of chalk, and having held it in the flame of the candle, I found that it did not give the same brilliant light as the absorbed lime. Upon exposing it, however, to the heat of the blowpipe, it emitted the same white and dazzling light which has already been described.

"In order to observe if the minute particles of the lime and the magnesia would remain in the pores of *tabasheer*, and give out their light when laid upon a hot iron, I took two pieces of tabasheer, and having discharged their natural phosphorescence, by exposing them to a high degree of heat, I placed one of them in lime-water, and the other in a solution of sulphate of magnesia. When the pieces of tabasheer were dry, I then put them upon a hot iron, and found that the piece which had been placed in the lime-water was considerably phosphorescent, while that which was immersed in the magnesian solution discharged no light at all.

"As this light seems to be developed by degrees of heat inversely proportional to the minute state of division in which

the particles of lime are combined, it is highly probable that denser kinds of wood, in which the pores are very small, might leave, after combustion, a residue in which the lime exists in a much more attenuated state than that which I used, and therefore the same intensity of light might be evolved at a temperature still lower than that which exists at the edge of a common flame. If this should turn out to be the case, the light of the lime and the magnesia might be developed at a temperature lower than that which discharges the phosphorescent light of minerals, and it might have a most extensive and useful application, both in the arts and in domestic economy. Even in the present state of the fact, the subject deserves farther investigation. D. B.

"EDINBURGH, *July* 29, 1820."

No. III.

INSTRUCTIONS TO THE CROWN-SOLICITORS IN IRELAND, REFERRED TO ON PAGE 283, AS HAVING BEEN ISSUED IN 1839 BY THE RIGHT HON. MAZIERE BRADY, THEN ATTORNEY-GENERAL FOR IRELAND.

SIR,—Finding that the instructions given to the Crown-Solicitor, by some of my predecessors in office, on the subject of challenging jurors, have been occasionally misunderstood, I have felt it my duty to consider those instructions, as furnished to me in pursuance of my letter of the 10th April last, and, in consequence, to make this communication, with the view of explaining somewhat in detail what I conceive to be the duty, in regard to this branch of the proceedings, of those who conduct the Crown prosecutions.

The main points of those instructions appear to me to be—first, that no person should be set aside by the Crown on account of his religious or political opinions; and, secondly, that the Crown-Solicitor should be able, in every case in which the privilege is exercised, to state the grounds on which he thought proper so to exercise it.

In the propriety of those directions I entirely concur. The first appears to me to be founded on the most obvious principles of policy and justice, and the second is consistent with all the rules which govern the responsibility of public officers.

But those instructions were not intended to have the effect, and, rightly understood, they cannot be interpreted to mean, that the Crown should altogether abandon the privilege of setting jurors aside, or challenging them on fair and legitimate grounds. The Crown, it is true, has not, as many persons erroneously suppose, the right of peremptorily challenging. This right, though given to the prisoner in certain cases, and to a limited extent, has been expressly prohibited by statute in the case of the Crown; and the Crown, therefore, cannot absolutely and in all events prevent a juror from being sworn on any trial, unless for some especial legal cause stated in court, and admitted by the judge to be sufficient. In practice, however, the privilege of setting jurors aside at the instance of the Crown has been admitted as consistent with the true construction of the statute, which abolished the right of peremptory challenge; but this setting aside, it is to be recollected, is, or may be, but temporary; for should the pannel of jurors be exhausted by the challenging of the prisoner, or by the setting aside of jurors on the part of the Crown, those so set aside must again be called, and will be sworn on the jury, unless the Crown can then assign a legal cause of challenge.

When such legal cause exists it will be your duty to act upon it. The ordinary books of practice on the subject point out the various grounds, whether arising from affinity or connexion with the prisoner, personal infirmity, legal incompetence, supposed bias, actual partiality, undue influence, or other causes on which such challenges can be sustained; and in any case of doubt or difficulty you can have the assistance and advice of the Crown counsel in attendance at the trial. I do not mean that, in cases where such challenge for causes can properly be taken, this should be formally put forward in the first instance. The persons to whom such objections apply may be set aside according to the usual practice, reserving, of

course, the assignment of the legal cause of challenge in case it shall be found necessary, from the exhaustion of the pannel, again to call the jurors who may have been at first set aside. In cases, however, where the cause of objection is apparent, it may generally be convenient, and prevent misconstruction, that it should be openly stated, at the time of asking that the juror should be ordered to stand aside.

In regard, therefore, to cases in which you may, if necessary, be thus able to assign a just and legally sufficient cause of challenge, I do not apprehend that much difficulty can arise in the practical performance of your duty, which is, as to this subject, to prevent any person so liable to objection from being sworn on the jury.

Cases, however, may not unfrequently occur in which it will, I admit, be expedient, for the security of the due administration of justice, that persons should be put aside on being first called, against whom such legally sufficient cause of challenge could not eventually be sustained. And it is with reference to this class of cases that the instructions of preceding Law officers have been conveyed to you, and which I entirely concur in and adopt—that no person should be thus set aside in any case merely by reason of his professing particular religious or political opinions.—I do not feel at liberty to say, as an officer of the Crown, that such profession can disqualify any individual, otherwise legally competent to serve on a jury, from doing justice between the Crown and the subject; and, speaking as a private member of society, I do not believe that any grounds exist which would justify the making such a distinction the basis of an opposite rule of conduct.

But, with this limitation, I wish it to be understood that the setting aside of jurors by the Crown is not to be confined to cases in which an actual legal cause of challenge could ultimately be established, and I will mention some instances in which it appears to me that the privilege may be exercised with justice and propriety.

I consider that members of secret and exclusive religious or political societies, to whatever sect or party they may belong, or whatever be the objects of such societies, are objectionable

as jurors, more especially in cases where it is known or supposed that the individual on trial is himself a member of such a society. When the indictment is directly for belonging to such a society as being an illegal body, or participating in some act or demonstration connected with it, the objection, I apprehend, might, if necessary, be put forward as a legal cause of challenge; but even in other cases, I think it will be a proper exercise of the discretion vested in you to put aside any juror who is liable to such objection. I wish it, however, distinctly to be understood that I confine this observation expressly to societies whose proceedings, so far as is known of them, are both secret and exclusive. In cases, too, arising out of or connected with trade combinations or other confederations of a like character, it will obviously be improper to have on the jury any person who may be known to be himself engaged in the same or a similar association, or to have given countenance or encouragement to it.

There is a description of individuals not, generally speaking, in themselves personally objectionable, but whose vocations render them peculiarly liable to be influenced by apprehension of injury or hope of benefit, in their business, from those classes to which the prisoners, their friends, and associates more commonly belong. I allude to the ordinary publicans, especially those residing in the country in remote or unprotected situations, or those whose houses of business in the towns are the common resort of such classes; and in any case of moment, especially in capital cases, I am prepared to say that you should on the part of the Crown have such individuals put aside when called upon the jury.

I think persons, if any such should be summoned, who are not acquainted with the English language, may very properly be put aside. I, of course, exclude from this observation cases of foreigners summoned on juries *de medietate linguæ*.

Cases may occur attended with such peculiar local excitement in a particular town or district, as to render it very desirable that the jury should not comprise any persons from that locality, and in such cases I think the privilege of the Crown may be properly exercised in putting aside such persons.

In thus mentioning the above as instances of fit occasions for the exercise of your discretion, I do not mean to convey to you that they are the only cases in which it should so be exercised; others perhaps your own experience may suggest to you, and I will give the best consideration in my power to any communication you may think fit to make on that subject, as circumstances may require.

In the practical exercise of this privilege I cannot lay down any other rule for your guidance, as to the degree of evidence you are to require of the fact of any particular juror being liable to objection, than that which is implied in the second branch of the instructions to which I have already referred, namely, that you must consider yourself responsible for the propriety of the act in each case; and, accordingly, be prepared to show that it was founded on information, either within your personal knowledge, or that of some of your assistants, or derived from authentic and trustworthy sources on the accuracy of which you can reasonably rely. You will not refuse to receive the communications of parties who may be personally interested or engaged in the prosecution; but, in judging of the weight due to such information, you will take into consideration the probable bias of the party by whom it is given, and endeavour, as far as may be, to test its accuracy by other and impartial testimony.

In receiving such information from any magistrate, chief constable, or other public officer, you should make a note of the name of the person giving it, in order that, if found to be inaccurate, due inquiry may be made into the conduct of the individual making the communication; and should any instance occur in which it may come to your knowledge that a public officer has knowingly misled you by false information respecting a juror, I need scarcely remind you that it will be your duty without delay to report such conduct to the Government.

I have thus endeavoured to convey to you my opinion of the course to be pursued by those who conduct the Crown prosecutions in this important particular. In those prosecutions the discovery of truth and the attainment of justice are the

paramount considerations to be attended to; and to those ends nothing can more powerfully conduce than the impartial return and selection of jurors. In exercising the privileges of the Crown on this subject you will, I have no doubt, regard only the public duty confided to your charge, remembering at the same time how important it is that the performance of that duty should be as much as possible divested of any appearance of prejudice or partiality, avoiding unnecessary offence to the private feelings of individuals, and, above all, preserving that public confidence in the administration of justice, which is the best guarantee of the peace and good order of society.—I have the honour to be, Sir, your very obedient servant,

MAZIÈRE BRADY.

No. IV.

NOTE ON THE IRISH CONSTABULARY FORCE.

The Acts under which the police of Ireland was constituted prior to 1836 were the 54 Geo. III. c. 131, commonly called the Peace Preservation Act, and the 3 Geo. IV. c. 103 (the Constabulary Act). There were some other statutes passed to amend these Acts, but they did not affect the principles of the system. The 3 Geo. IV. c. 103, virtually determined the operation of several Acts of the Irish Parliament passed from time to time for the appointment of constabulary for the several baronies of each county, and under which the appointments had been vested in the respective grand juries. Other Acts, regulating the appointment of parochial and other petty constables, remained untouched.

The Peace Preservation Act, 54 Geo. III. c. 131, empowered the Lord Lieutenant and Privy Council to declare any county or barony to be in a state of disturbance, and to require an extraordinary establishment of police; upon which the Lord Lieutenant was authorised to appoint chief magistrates of police, not exceeding one for each such barony, and to appoint

a chief constable and a certain number of sub-constables for his assistance. The duties and powers of the chief magistrates under this Act were very important, and they communicated to the Lord Lieutenant a weekly return of the state of their respective districts. All the appointments under this Act were vested in the Lord Lieutenant.

The 3 Geo. IV. c. 103, professed to introduce a more effective system for the appointment and regulation of constables. Under it the Lord Lieutenant was authorised to appoint a chief constable for every barony in any county. The appointment of constables and sub-constables was given to the magistrates at Quarter Sessions, but the Lord Lieutenant had power to dismiss them at pleasure. The Lord Lieutenant was by this Act authorised to appoint one or more persons, not exceeding four, to be general superintendents and inspectors of the chief constables and constables. The duty of these inspectors-general, as they were called, was to inspect the constables in the districts committed to their superintendence, and to report to the Lord Lieutenant on the conduct and proceedings of all chief and other constables therein, and (with the consent and approbation of the Lord Lieutenant, signified by his Secretary), to frame rules, orders, and regulations for the conduct and proceedings of such chief and other constables. (These rules were to be subject to the approval or rejection of the magistrates at Quarter Sessions). They had not under this Act the power of appointment or dismissal of any member of the constabulary. This Act extended the powers of the Lord Lieutenant in appointing paid magistrates in cases not provided for by the 54 Geo. III. c. 131, authorising him to make such appointment on the certificate of a certain number of the local magistrates assembled in Sessions. The magistrates so to be appointed were not by the Act placed in any way in connection with or under the control of the inspectors-general of police. They were to communicate directly with the office of the Chief Secretary, and they were authorised to call for the assistance of all chief and other constables appointed under the Act.

The 5 Geo. IV. c. 28, made an alteration in the mode of appointing constables, which to some extent gave a power of

appointment to the inspectors-general, by directing the magistrates to furnish them with lists of fit persons for supplying vacancies in the force, and enabling the inspectors-general to appoint from such lists; but this power was altogether nominal in regard to patronage.

It was under these Acts—the 54 Geo. III. c. 131, in disturbed districts, and the 3 Geo. IV. c. 103, generally—that the constabulary force was organised in Ireland at the time of the passing of the Act 6 and 7 Wm. IV. c. 13. The scope and spirit of this Act appear to be to introduce one uniform system for the appointment and regulation of the constabulary; and to provide for the more general appointment of stipendiary magistrates. It, in the first place, repeals all the former Acts, including the 54 Geo. III. c. 131, making provision, however, for the continuance of an adequate force in parts which had been proclaimed under that Act so long as might be necessary, and for similar arrangements in future.

The most important alteration made by the Act of 1836 related to the number and distribution of the chief officers of the force. This Act enabled the Lord Lieutenant to appoint one Inspector-General, "who shall be charged with the general direction and superintendence of the force;" two deputies to that office; four county inspectors, each of whom is by the Act to be "charged and invested with the general government, direction, and superintendence of the police force within such number of counties as the Lord Lieutenant may direct;" and a certain number of sub-inspectors in aid of the county inspectors, and subject to their direction and control. It also gave power to the Lord Lieutenant to appoint paymasters; and it authorised his Excellency to appoint at pleasure chief constables, head constables, constables, and sub-constables, in every county in the proportions specified in the Act. The absolute power to dismiss every officer and member of the force was exclusively given to the Lord Lieutenant. Thus the entire appointment and control over the constabulary force became vested in the Executive Government, free from all the restrictions which, under former Acts, had resulted from the power given to the local magistrates. Besides the general authority given to the

Inspector-General by the words quoted, that officer was authorised (with the approbation, however, of the Lord Lieutenant) to frame regulations for the general government of the several persons to be appointed to the police force—to order any of the officers, or other members of it (but subject to the direction and control of the Lord Lieutenant), to repair to different counties; and he was also to ascertain (with the aid of the Receiver, and subject to the approval of the Chief or Under Secretary), the amount of monies chargeable to each county under the provisions of the Act. The Act, however, gave powers to county inspectors within their districts, in words as general and as comprehensive as those which defined the powers of the Inspector-General; and the authority intended to be given by these words was, therefore, not an absolute and independent control over the force, but related merely to matters of internal discipline and arrangement for the regularity of the proceedings of the different members of the force, so far as it authorised the Inspector-General to act by himself. So far as regarded anything to be ultimately determined by the Lord Lieutenant, it was only a power to see to the due observance of the rules and regulations of the force as approved by his Excellency, and to report to him any matters requiring the exercise of his authority. It followed that every appointment or dismissal of a member of the force of all ranks, every question relating to such appointment or dismissal, every inquiry necessary to determine on the propriety of such appointment or dismissal, every question and inquiry as to the numbers of constables, &c., to be appointed to particular localities or for particular counties, and every question relating to the superannuation of any member of the force, his rate of pension, and all these matters, under the very terms of the Act, were out of the control of the Inspector-General, it might be added, out of his province altogether, save so far as the Lord Lieutenant, either by general rules or by particular directions in special cases, might place the duty of furnishing him with the necessary information in the hands of that officer, or think fit to act on his recommendation or report, or to delegate to him the subordinate exercise of authority in particular cases. The Act was thus

not departed from, either in letter or in spirit, by any interference of the Lord Lieutenant or Mr Drummond, who in such matters represented him, or by his taking them altogether into his own direction and control, without reference to the Inspector-General, save so far as the interposition of that officer might be necessary to carry instructions into effect when communicated to him. The complaints of Colonel Shaw Kennedy, referred to on p. 277, were accordingly founded on a misapprehension of his relation to the force under the Act of 1836.

The only remaining portion of the Act which requires notice is that which provides for the appointment of stipendiary magistrates. The Act does not constitute the persons to be so appointed magistrates of police, as under the 54 Geo. III. c. 131, they are merely justices of the peace, to act as such in aid of the local magistrates, or to supply their place when necessary; and they are in no way connected by the Act with the police establishment, except in regard to payment of their salaries, &c., which is to be made by the Receiver of the constabulary.

On the whole, the office of the Inspector-General was one very much of a merely ministerial character, the duties of it being to carry into effect the appointments and orders of the Lord Lieutenant in all matters relating to the constabulary force, commonly conveyed, as to all other public departments in Ireland, through the Under Secretary; to see to the due observance, in all ranks of the force, of the rules and regulations for its conduct and discipline approved of by his Excellency, and to exercise in that respect a general superintendence and control over the force; and to report to the Government all matters relating to the force or to the state of the county which might require the interference or directions of the Executive.*

* This note, and the two next following it, are founded on papers written, in 1839, by the Right Hon. Maziere Brady, and placed at the present writer's disposal.

No. V.

THE CHARGES AGAINST THE IRISH GOVERNMENT AS TO THE ADMINISTRATION OF JUSTICE.

These were—

First, That since the passing of the new Jury Act an inferior class of jurors had been returned.

Second, That the Crown had abandoned the right of challenge.

Third, That counsel for the Crown did not address the jury in reply.

Fourth, That justice was impeded by the practice of permitting prisoners to have copies of the informations against them before trial.

As to the first: The Jury Act alluded to is the 3d and 4th William IV. c. 91 (1833), (corresponding in substance with the English Act, 6th George IV. c. 50.) The classes of persons whom the Act recognised as qualified, are thus enumerated in the first section of the Act, viz. :—

Every man between 21 and 60 years of age—

1. Having L.10 a-year in lands or rents in fee-simple, fee-tail, or fee-life.
2. Or, L.15 a-year in lands held by lease, originally made for a term not less than 21 years.
3. Or, being a resident merchant, freeman, or householder, having a house in any city, town, or borough, of the clear yearly value of L.20.

In addition to these classes in counties at large, it is further provided that, in counties of cities and counties of towns, there shall be a fourth class, viz., every resident merchant, freeman, and householder having lands or tenements or personal estate of the value of L.100. The second section gives exemptions to certain classes, such as peers, judges, clergymen, barristers, attorneys, &c. &c., unnecessary to particularise. The only qualification previously existing for a juror in criminal cases was, that he should be a 40s. freeholder! And even that

limited qualification was not requisite in a corporate city or town.*

There was nothing in the machinery of the Act itself to render it likely, if all parties did their duty, that the jury lists would consist of the inferior classes. The Clerk of the Peace was to issue his precept once a-year to the high constables, and collectors of Grand Jury cess, to return him lists of qualified persons in their respective districts. The high constables were to make out the lists, stating the names, abodes, quality, business, and nature of the qualification of said persons and return them to the Clerk of the Peace, who, after keeping them for three weeks for the inspection of any inhabitant, should lay them before a special session of justices of the county. A special session was to be fixed for each division at the October Quarter Sessions; public notice of it to be given, and the high constables to attend it. The justices at this special session ought to revise the lists, by striking out the names of persons disqualified, and inserting the names of qualified persons. On the lists being thus revised, the justices ought to have one general list made out, arranging the names according to rank and property, and delivered to the Clerk of the Peace, who ought to have it copied in a book, which he is to deliver to the Sheriff, and which becomes "The Jurors' Book for the year." As to trials of criminal cases, the Sheriff had, as he had before the Act, a certain discretion as to the persons to be returned by him, restricted solely by the obligation to return the names of persons entered in the jurors' book.

If, therefore (and there was no evidence of it), the class of jurors returned was inferior to that returned before the Act was passed, the fault must have been either in the Sheriff or his officers, or the county could not afford an adequate number of a superior class. But in this latter respect it was improbable that any county had deteriorated since the Act was passed. The explanation of the inferiority of the jurors, if it existed, lay in the non-performance of their duties by the persons appointed, as above explained, to select them.

* *See* Kirwan's Trial, p. 31; Howell's State Trials, pp. 578–631.

The high constables, or collectors of Grand Jury cess, who were to make out the lists, were officers appointed by an irresponsible body, the Grand Jury; they were, or might be, changed at each assizes, and they had not any remuneration for the duty of preparing the lists, their emoluments being solely derived from a poundage on the collection of cess. They were, consequently, in some counties negligent of this duty. The duty of revision, again, was delegated to the justices of the county, who might, from carelessness, omit to attend at the time appointed for the special sessions, as occurred in Sligo in 1837, and recently on the trials of the Fenians in 1867; or might, for party purposes, take on themselves to alter the lists in a manner not sanctioned by law.*

The Act imposed penalties for neglect of duty or misconduct in the collectors and other officers, but the technical difficulties attendant on all proceedings for penalties are very great, and the mere enactment of penalties rarely produces the desired effect.

The non-existence or defect of a jurors' book for a county does not invalidate the trials. An Act was passed with this view in 1854, to amend the Jury Act, in consequence of the non-observance of that Act; and the Jury Act itself provides, that it shall not be an objection to a trial that any juror was returned who was not named in the jurors' book. At the special commission in Tipperary in January 1839, the judges agreed that there not being a jurors' book for that county formed no ground of objection to the proceedings.† And the same ruling has been pronounced in the Fenian trials.

So far, then, as regards the Jury Act itself, it in fact raised considerably the qualification of property to be required from jurors in criminal cases, excluding none save those who wanted that qualification; and it provided a machinery sufficient, in proper hands, to secure a true book or list of every person so legally qualified, out of which the Sheriff might, if he pleased, select the highest persons in the county to serve as jurors.

* *See* The Carlow Case.

† This was the special commission at which the murderers of Cooper were convicted.

If, then, the juries were returned out of the inferior ranks of jurors, the fault rested not with the law itself; still less was it imputable to those who brought in that law; and, above all, it was no ground of blame to the Government, whose officers, from the highest to the lowest, had nothing whatever to do with the selection or return of jurors.

The true cause of the inferiority of the jurors in criminal cases, where it existed, was the objection which those of the better class had to be put on such juries, as considering it derogatory to them, and attended with much personal trouble and inconvenience. The Sheriff and Substitute consequently omitted that class of persons whom they supposed likely to be offended by being summoned to the Crown Court as jurors, or whom they might choose to favour in that respect; and their inferior officers, the bailiffs, often took money to excuse or omit serving many of those whom the Sheriff actually put on his pannel.

The second ground of charge was, that the Crown had abandoned the right of challenge to jurors. This was a total mistake, founded either in ignorance of the subject or wilful perversion of the facts. There are two species of challenge to individual jurors, viz., challenge for cause, and peremptory challenge. Challenge for cause is where a cause can be and is assigned, on account of which the person called ought not to be sworn on the jury. Challenges for cause had always been allowed both to the Crown and to the subject, and had always been acted on by both. They had never been abandoned by the Crown, either by instructions to the Crown solicitors or otherwise. The second class of challenges, *i.e.*, peremptory challenges without cause assigned, stood on a very different footing; and so far from the Crown having abandoned this power, it had not possessed it for several centuries.

In the earlier periods of the law the Crown had the right of peremptory challenge, and without limit; a power which was so absurd, or so liable to abuse, that it was altogether abolished by Act of Parliament in the reign of Edward I.,* and has never

* Stat. 33 Edward I. c. 4.

since been restored. On the contrary, that statute of Edward I. was re-enacted in the Jury Act* in England, and in the Act for amending the Criminal Law† in Ireland, and the law has accordingly been, from the reign of Edward I. to this day, that the Crown has no right of peremptory challenge.

The right of the subject in this respect is different. At the common law he had, in cases of felony, the power to challenge peremptorily to the number of thirty-five. This has been restrained by statute, and at present the law, as settled in Ireland by the 9th Geo. IV. c. 54, sec. 9 (and in England by the 6th Geo. IV. c. 50, sec. 29), is that the prisoner, in cases of murder or other felony, has not power to challenge peremptorily more than twenty. (The peremptory challenge was even allowed to a prisoner in cases of misdemeanour.)

The true state of the matter was this:—The old Act of Edward I. having taken away the right of such peremptory challenge from the Crown, a contrivance was resorted to, and obtained the sanction of the judges, for evading the Act in this way, namely, by holding that the construction of the statute was, that the King was not bound to state his cause of challenge to a juror until the whole pannel or list of jurors was called over, and that the Crown might, on a juror being called, direct him to stand aside for the present, *i.e.*, until the whole list was gone through; and that in this way, if a jury could be had out of the list without going back to the persons so set aside, they were excluded, and thus virtually a peremptory power of putting particular individuals off juries was assumed and exercised. It prevailed in England, and particularly in state trials, but has become of late years almost obsolete there. In Ireland it received a kind of legislative sanction by the clause of the 9th Geo. IV. c. 54, sec. 9, which re-enacted the prohibition of the Act of Edward I, but declared that this should not affect the power of the Courts to bid a juror stand by at the prayer of those who prosecuted for the King, as had been theretofore accustomed. This was the power which was acted on in Ireland, and abused most grossly, to the disgust and indignation of the Roman Catholics and liberal Protestants. It was

* 6 Geo. IV. c. 50, sec. 29. † 9 Geo. IV. c. 54, sec. 9.

used unscrupulously, to the exclusion of persons solely from religious and political motives. The exercise of it has been checked, but the power has not been abandoned, as untruly alleged. The letters of instruction of Perrin and O'Loghlen were merely that no person shall be set aside on account of his religion or politics, and that the Crown Solicitor should be able to state to the Attorney-General the grounds on which he should in this way object to any individual. Mr Brady's instructions are given at length *ante*, p. 444.

The third charge was that Crown counsel did not make speeches in reply. This charge was meant to apply to cases of felony, in which the prisoner's counsel had not, till 1836, the privilege of addressing the jury. That privilege was given by the statute 6 and 7 William IV. c. 114 (1836), commonly called the Prisoners' Counsel Bill. In practice,* previous to that Act statements by counsel for the prosecution were extremely rare, the ordinary practice being to proceed at once to the examination of the witnesses, leaving the full exposition of the case on both sides to the judge in his charge to the jury. The case on both sides was generally got out by examination and cross-examination of counsel. The above statute having given the prisoner's counsel, in cases of felony, the privilege of addressing the jury, it became necessary for counsel for the prosecution more frequently than before to make a statement of the case. But still that course was, and perhaps very properly, exceptional. The constant habit of speaking to reply tends to introduce a contest of argument and ingenuity between counsel not consistent with the course desirable in trials on capital charges. Where, however, the want of a speech from the Crown counsel might seem to admit that the case was truly such as represented by the counsel for the prisoner, there ought to be a speech. The matter was accordingly left, as in England and Scotland now, to the judgment and discretion of the counsel. The principle of the Prisoners' Counsel Bill, as

* In England the practice was always different, counsel for a prosecution generally making an opening statement.

it passed the House of Commons, was to give the final reply to the counsel for the prisoner.*

The fourth charge was that justice had been impeded by the practice of allowing prisoners to have copies of the informations against them before trial. This is a right given to parties accused by the statute 6 and 7 William IV. c. 114, which is not merely an Irish Act, but a general statute for the United Kingdom (except Scotland). The Government had no power to control or abridge this right. It rests on the most obvious principles of justice. Before the Act passed, a prisoner had no means of knowing what was sworn against him, except he was present at the examination of the witnesses (which was not always the case in Ireland), and even then he could only instruct his counsel or attorney from recollection. It was said the practice was calculated to defeat the ends of justice, by informing the parties accused of the names of those who had lodged informations against them, and by enabling them to get up *alibi* defences. The information of the names of the witnesses was supposed to be dangerous, as exposing such witnesses to danger. This, however, was a danger equally existing under the former practice, at all events when magistrates acted according to law by having the witnesses examined in presence of the accused before his committal; and it could not deter witnesses from coming forward, as, at all events, they must appear at the trial. The Act was passed for the protection of the innocent, by enabling the prisoner and the Court to detect any contradictions between the statements of the witnesses; and instances of such contradictions so proved, and of the most vital consequence to the protection of innocence, are not unfrequent.

* See now the Statute 28 and 29 Vict. c. 18.

No. VI.

STATE OF THE LAW IN IRELAND AS TO ILLEGAL SOCIETIES.

When illegal societies were constituted by the administration of oaths, the act of administering, tendering, or taking such oaths was in itself an indictable offence of a highly penal nature, and the statute law was abundantly sufficient to meet most cases where the charges could be supported by legal evidence.

The offence was felony,* and subjected the person convicted of it, in some cases, to the punishment of transportation for life, in others to transportation for seven years.

When a plain and express purpose of treason or sedition, or of committing any other indictable offence, was avowed in the constitution of any society or confederacy, or evidenced by its proceedings, the parties were liable to indictment at the common law, and in such cases the questions of difficulty could be only questions of evidence.

But in many cases societies had been declared unlawful, without reference to their ultimate objects, or requiring any proof to be given of those objects, the mode of organisation or constitution of the society forming in itself the test of its illegality for whatever purpose it might be formed. The statutes passed for this purpose had been devised in order to prevent the formation of any societies so constituted, and to facilitate the conviction of the members of illegal societies by means of evidence of those acts and proceedings of such bodies which must necessarily be known to many, and therefore more capable of proof than the ultimate and secret designs of the leaders.

The statutes in Ireland which related to this subject were the Irish Act, 33 George III. c. 29 (commonly called the Convention Act), and the 4 George IV. c. 87.

The former statute, 33 George III. c. 29, was of rather a limited application; it only declared illegal assemblies, committees, or other bodies elected to represent, or assuming to represent the

* *See* 27 Geo. III. c. 15, sec. 6, Irish Act, and 50 Geo. III. c. 102, sec. 1, &c.

people, or any portion of them, under pretence of petitioning for, or in any other manner for procuring, an alteration of matters established by law in Church or State.

It thus required proof of two things—first, an election or representation of the people, or some portion of them; and secondly, that such elections, &c., should be for the alteration of some matter established by law in Church or State. It was passed at a peculiar period of Irish history, and to meet a particular emergency, and has been rarely put in force since.

The 4 Geo. IV. c. 87, was of a much more comprehensive character; it was taken from the English Act against the Spencean and other societies, 57 Geo. III. c. 19, sec. 25, with some alterations.

The 4 Geo. IV. c. 87, sec. 1, for Ireland, declared that any and every society, association, brotherhood, committee, lodge, club, or confederacy whatsoever, now established, or hereafter to be established in Ireland, of the nature hereinafter described, shall be, and be deemed and taken to be, and is hereby declared to be, an unlawful combination and confederacy; that is to say, any and every society, &c., the members whereof shall, according to the rules thereof, or to any provision or agreement for that purpose, be required or admitted, or remitted to take any oath or engagement which shall be an unlawful oath or engagement, within the intent and meaning of the said recited Act of the fiftieth year of His late Majesty's reign, or to take any oath not required or authorised by law; and any and every society, the members whereof, or any of them, shall take or in any manner bind themselves by any such oath or engagement upon becoming, or in consequence of being members of such society; and any and every society, the members whereof shall take, subscribe, or assent to any test or declaration not required by law; and any and every society, &c., of which the names of the members, or any of them, shall be kept secret from the society at large, or which shall have any committee or select body chosen or appointed in such manner that the members constituting the same may not be known by the society at large to be members of such committee or select body, or which shall have any president, treasurer, secretary,

delegate, or other officer, chosen or appointed in such manner that the election or appointment of such persons to such offices may not be known to the society at large, or of which the names of all the members, and of all committees or select bodies of members, and of all presidents, treasurers, secretaries, delegates, and other officers, shall not be entered in a book or books to be kept for that purpose, and to be open to the inspection of all the members of such society; and all such societies, &c., as aforesaid, are hereby declared to be unlawful combinations and confederacies; and every person who shall become a member of any such society, as aforesaid, and every person who shall directly or indirectly maintain correspondence or intercourse with any such society, or with any division, branch lodge, committee, or other select body, president, treasurer, secretary, delegate, or other officer or member thereof, as such, or who shall, by contributions of money or otherwise, aid, abet, or support any such society, or any member or officer thereof, as such, shall be deemed guilty of an unlawful combination and confederacy.

The matters of proof requisite to sustain a charge under this Act were, therefore, that an association had been *established;* that its rules or proceedings fell within any of the particulars specified in the Act; and that the accused was a member of the association, or maintained correspondence or intercourse with it, or with any member of it, or aided or supported it, or any officer or member of it, with contributions, money, or otherwise.

It is evident from this, that some further enactment was required to render sufficient the evidence, and almost the only evidence (except informers and accomplices) which had been discovered, in most of the Riband cases brought under the notice of the Government, viz., the possession of signs and passwords. To meet the difficulties of proof a draft Bill to amend the Act of the 4 Geo. IV. c. 87, was prepared by Mr Brady when Attorney-General. It became law,* and has since been followed by a series of enactments aiming at the same end.

* This is the Act 2 and 3 Vict. c. 74. Since then have been passed 11 and 12 Vict. c. 89, 19, and 20 Vict. c. 78, and 25 and 26 Vict. c. 33.

No. VII.

OBSERVATIONS BY DR HANCOCK ON THE TABLES PRINTED AT PAGE 388, SHOWING THE FINANCIAL CONDITION OF THE IRISH RAILWAYS.

"It appears from these tables, that at present there are in Ireland three railways bankrupt or winding-up; two at a stand-still; six paying no dividend on the preference stock; ten paying no dividend on the ordinary shares; seven, the dividends of which were less than those paid on the Government Funds; six paying dividends at a rate less than that of commercial interest; and but one the shares of which were above par. He thought that where lines had become bankrupt, or where works were stopped, Parliament should not give them extensions of time, or try to have them worked on the commercial principle, as he did not think that they would succeed on that principle. He thought that these lines should be examined, and if their traffic would pay for the cost of completing them, supposing the money to be advanced at 3½ per cent., then the Government might safely complete those lines. If the traffic would not pay for the cost of completing them at 3½ per cent., then, if the localities took such an interest in the matter as that they would guarantee any portion of the cost of either keeping the railways in repair or of making them, so as to reduce to a profitable speculation for the Government to advance money at 3½ per cent., then he thought that they might be completed and become public property; and so far as money already advanced was concerned, he would have the lines worked for about seven years, and if they realised any profit beyond what would pay the Government 3½ per cent. on what they advanced on them, he would then give the value of that excess as compensation to the existing owners. He would have the Government take possession of lines either bankrupt or where the works were not proceeding, only on the principle of the general taxes not losing. It was not a question of transference of burden, but simply a question of management. With regard to lines which only

paid dividends to preference shareholders, he thought that as the limit of twenty-one years fixed by the Act of 1844 runs out, the Government should take the lines. The traffic should be valued, and the lines purchased by the Government at 3½ per cent., and he would do the same with those lines which paid no dividend to their ordinary shareholders. With regard to lines that paid less than the rate of interest in the Funds, he would not interfere with them, unless the companies were anxious to sell. With respect to those lines which paid more than the interest on the Funds, they were, of course, not wholly unsuccessful as commercial speculations, and there would be no occasion, till the experiment of Government management was tried, to interfere with them at all. He thought the Government ought to take contracts for keeping the lines in repair, but the receipts should go to the Government altogether, just as in the case of the Post Office. He thought that all the lines that it would be really profitable to make on the commercial system in Ireland had been made, and that new lines should only be made like country roads—namely, the locality anxious to have them should offer to contribute a part of the expense, whatever would make them profitable; and if the locality guaranteed that, the Government should advance the money, and the railway should become public property.—*Journal of the Statistical and Social Inquiry Society of Ireland.* Part xxxii. Nov. 1866.

No. VIII.

THE DRUMMOND SCHOLARSHIP IN THE UNIVERSITY OF EDINBURGH, MENTIONED AT PAGE 430.

The Deed of Foundation of this Scholarship is printed in the *Edinburgh University Calendar* for 1865–6, p. 198. The following summary of its main features appears in the same publication for 1867–8:—

"This Scholarship was founded in 1865 by Miss Elizabeth

Drummond, in memory of her brother, Captain Drummond, R.E., Under Secretary for Ireland, 'and for the encouragement and promotion of the study of Mathematics and Natural Philosophy.' It is of the annual value of about £100, and is tenable for three years. By the Deed of Foundation it is open to Graduates in Arts of not more than three years' standing, who shall have graduated with Honours in the Department of MATHEMATICS. It is not to be held with any other Bursary, Scholarship, or Fellowship, of any Scottish University; and the holder is recommended to travel for the purpose of inspecting, in this and other countries, remarkable engineering and architectural structures, to extend his knowledge of the practical application of mathematical principles; and, if required by the Senatus Academicus, to deliver reports on the principal structures examined by him, and the mathematical principles exemplified thereby—which reports the Senatus may cause to be publicly read in the University or elsewhere in Edinburgh. The first competition will take place in November 1868, on days to be announced in next *Calendar*." The Senatus Academicus are the patrons.

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ERRATA.

Page 64, 16th line from top, *for* the British Survey, *read* the great triangulation in connection with the British Survey.
— 101, 21st line from top, *for* Mitscheelich, *read* Mitscherlich.
— 251, 15th line from bottom, *after* Pigot *add* Law adviser from 1837 to February 1839.

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